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OF

REMARKABLE CASES IN SURGERY.

BY

PAUL F. EVE, M. D.,

PROFESSOR OF SURGERY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF NASHVILLE.

Ars Medica tota observationibus.

FREDERICK HOFFMAN.

La Médecine ne s'enrichit que par les faits.

F. J. V. BROUSSAIS.



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TO

CHARLES D. MEIGS, M. D.,

PROFESSOR OF OBSTETRICS, ETC., IN THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA, PA.

It is meet that this work should be inscribed to you. Thirty years ago you put into my hands the "First Lines of Medicine," and endeavored to inspire me with the desire to comprehend the fearful, and wonderful structure of man. While you have good reason to regret that your eldest pupil has proved to be a very unapt scholar, and he may deplore falling so far below the highly honored station you have attained by a life devoted to teaching the mysteries of the profession, he nevertheless comes at this late period to dedicate to *his revered preceptor*, a COLLECTION OF CASES in which much is seen of the extraordinary endurance of the human system, the curious and almost incredible injuries it has sustained, and the favorable results under many apparently desperate circumstances.

As you have obtained all that others can bestow, for a long and faithful service to them, there remains for me only to express the heartfelt prayer of thousands of your patrons and friends, of your brethren and pupils—that your last days may be your best, and their end be crowned with the reward of the righteous.

P. F. E.

NASHVILLE, TENNESSEE, *September*, 1856.

INTRODUCTION.

IN preparing notes for lectures on surgery, I have often been struck with surprise at the number of extraordinary and remarkable cases found scattered through our periodical literature. It has occurred to me that a collection of these facts might be made available to the profession. Such a contribution has never been given to surgery. The assembling of detached cases of a most interesting and striking character, and classifying them under appropriate heads, cannot be a work of supererogation. If *the whole of our art is in observation, and medicine is only enriched by facts*, then surely a collection of the most remarkable must prove of essential service to its cultivators, not only in lightening their labors, but in aiding them in establishing the principles of the science. Harvey says there is no way more calculated to advance the proper practice of medicine than to give our minds to the discovery of the usual law of nature by a careful investigation of the *rarer forms* of diseases. M. Lordat published, in 1840, in the *Gazette Médicale*, of Paris, an article on the necessity of studying *rare cases*, declaring that at one time it was made the duty of the expounder of the doctrine of Hippocrates in the faculty of medicine in that city, to explain the history of these cases in connection with his official duties. All are familiar with the article "*Cas Rares*," by Fournier, in the *French Dictionary of Medical Science*, in sixty volumes. In Dr. Ranking's *Half-yearly Abstract of Medical Sciences*, is found a section devoted to *rare surgical cases*. And a few years ago, Mr. Walter C. Dendy, a surgeon of London, published a pamphlet entitled "*Wonders Displayed by the Human Body*." These facts then corroborate the

opinion that there is a demand for gathering and arranging the material here presented.

The volume now offered to the profession contains little else than a collection of remarkable cases in surgery. This is about all it professes to be. And believing that uncommon events and strange circumstances can best be described by those who have observed them, the language of the writer has generally been adopted with full credit to the source whence derived. The collector has been studious to do injustice to no one. He has taken the liberty occasionally to abbreviate articles; in some instances to give them a more striking and appropriate title; and now and then to add a few brief comments.

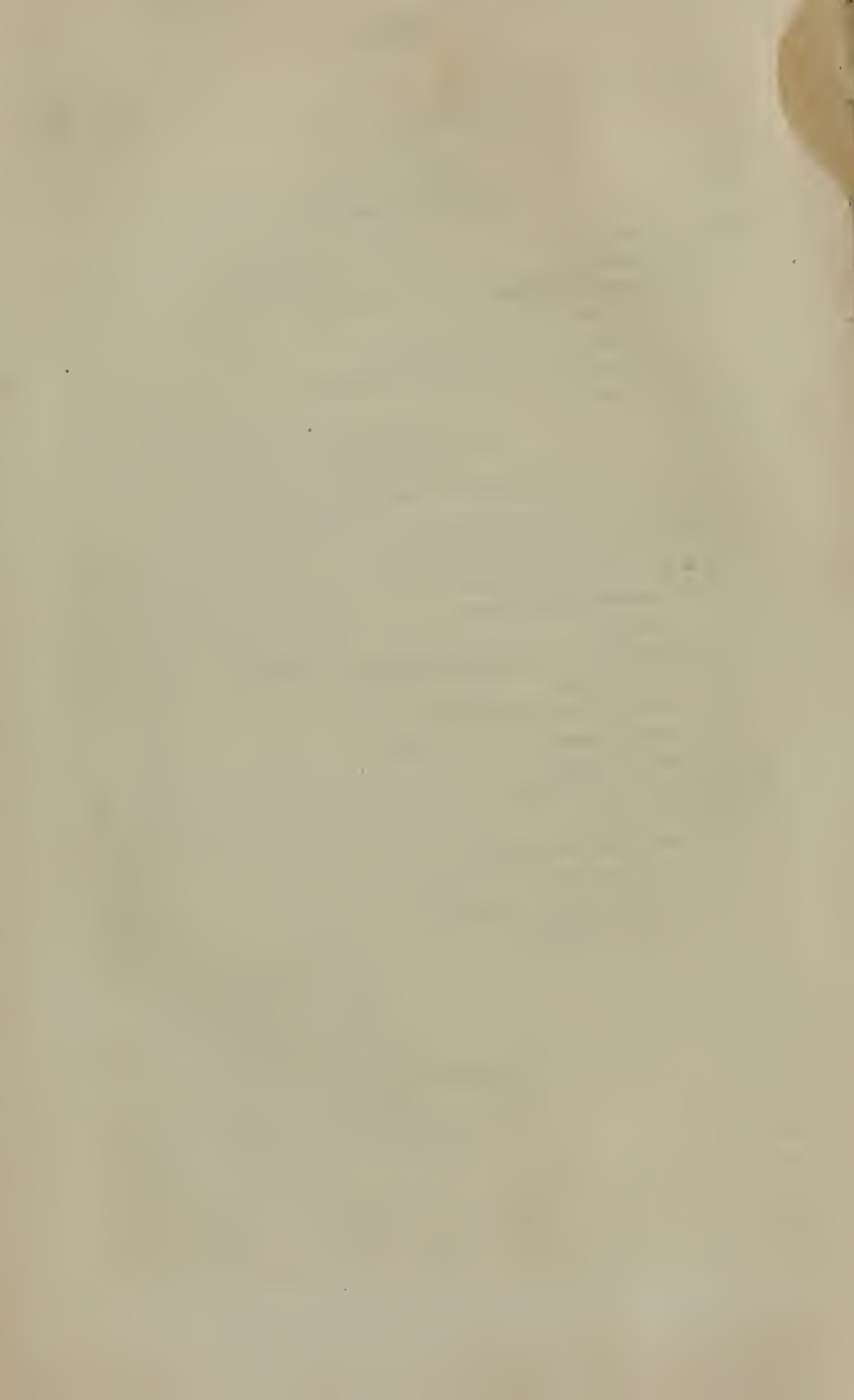
He has not presumed to suppose this to be a collection of *all* the remarkable cases which have occurred in surgery, but of course only those accessible to him most deserving a place, and entitled to credit. The object has been merely to gather for preservation the valuable material now existing mostly in a perishable form; to collect the important and instructive cases from our journals, &c., and arrange them for future reference. And whatever else may not be derived from the work now before the reader, it certainly suggests one practical lesson; this is, not to be easily discouraged in desperate surgical cases.

In making this collection we early experienced *l'embarras des richesses*. Much matter prepared for it has necessarily been omitted for lack of space, even in a large volume. This we hope will be ample apology for the absence of several cases which otherwise would have appeared. None, we believe, have been admitted into the collection but such as are strictly authentic; as it has been our aim to reject all of a doubtful character. In a work where we have found so much said for us, the labor has been light; and the only merit, if there be any at all, is in the selection of the matter. Of this the profession must judge.

The usual and now well-established division of the human body has been adopted in this collection of cases. The several chapters and sections will indicate this order, and their length, the supposed

importance of the respective regions which they represent. We have been compelled, however, to make the last chapter, that embracing the miscellaneous cases, much the largest; indeed, the section of it marked *marvellous*, might have properly included one-fourth of the volume; but by distributing these wonderful facts under their appropriate heads, the interest of the work has no doubt been promoted.

DR. WM. H. GOBRECHT, Philadelphia, Pa., has kindly superintended the passage of this volume through the press. To him, therefore, the reader and myself are indebted for its comparative freedom from errors. With much pleasure I take occasion to express my great obligation to him for repeated signal favors.



REMARKABLE CASES IN SURGERY.

CHAPTER I.

HEAD.

SECTION I.

INJURY OF THE SCALP.

CASE I. *A child completely scalped during delivery by an ignorant mid-wife.*

Although anonymous, and we object to all professional or scientific communications of this character, yet we admit this one, taken from the *New Jersey Medical Reporter*, 1852.

In the month of January, 1851, I was called to the wife of J. G., in labor with her second child. I reached the patient about dark, but, I believe, candles had not been lighted. She was taken in labor in the afternoon. I lived two miles from her, but was not sent for till after sundown. About that time, labor advanced very rapidly, and one of the attendants, an aged lady, somewhat dim-sighted, made an examination, and supposed that the placenta was presenting. The patient was screaming horribly, and said she was flowing to death. The old lady had formerly heard a physician say, that in case the placenta presented first, it must be ruptured, or the patient would flow to death. She accordingly took a pair of sharp-pointed scissors, and ran them into what she supposed to be the placenta. Another pain brought the head of the child into the world. I arrived at that moment. Upon making an examination, I was greatly surprised to find so smooth a head. Upon calling for a light, I discovered that the scalp was completely torn from the head, and thrown down over the chin and back of the neck. I delivered the woman instantly, and threw the flaps back over the child's head. The wound extended from the back of the right ear, across the top of the head, and one-third across the forehead on the opposite side. It was nearly twelve inches long. The child was perfectly scalped. The opening which the woman supposed was into the placenta, was upon the top of the head, and about two inches long. The pains of labor enlarged the wound, as a squirrel is sometimes skinned by an opening on the back, and pulling in opposite directions. I washed the wound, and brought the lips of it accurately together, and applied fine sutures and adhesive plaster to it. In three weeks the child was well. I never knew a wound heal more kindly in any subject.

CASE II. *Scalping by machinery in motion, and remarkable reproduction of tissue.* By Mr. Fleming. Ranking's Abstract, 1849.

On the morning of the 8th day of June last, Jane Jones, æt. 14, a brusher in Henry Houldsworth and Son's Spinning Mill, Cheapside Street, Anderston, came under my care. The following were the circumstances of her case:—

While engaged in brushing beneath the inner end of a mule frame, in a kind of half-sleepy state, she had inadvertently allowed her hair to come in contact with a small revolving horizontal shaft, which, in pulling round the hair, carried along with it about *thirty-five square inches* of the scalp, leaving the upper, front, back, and lateral parts of the skull completely exposed to that extent, the thin transparent covering of the pericranium being all that was left. On reaching the mill, I found her in a weakly, half faintish state, sitting upon a chair, supported by her friends. She had lost but little blood, but the left temporal artery soon began to bleed so freely as to require a ligature. The wound was dressed with the common adhesive plaster, covered with a cloth moistened with cold water, and the patient removed home to her bed, where she spent the first day and night in a much more comfortable state than could have been expected under the circumstances. On the second day, I found her in a remarkably comfortable state compared to what I expected to find; and was not a little surprised at her informing me that, at the time of the accident, she did not experience the slightest pain, nor was in the least aware of her misfortune, until she applied her hand to her head!

June 13. Going on favorably; the whole surface of the wound studded over with healthy granulations, with the exception of a dark-colored spot having a sloughy appearance, of about two inches in diameter, in the centre of the wound.

June 17. The whole of the dark spot sloughed off to-day, leaving about four square inches of the skull completely deprived of its pericranium—a superficial slough had separated from it on the 15th. Continued going on favorably, the wound diminishing in size very much; on the 27th it measured only *twenty-five square inches*. The denuded bone is dotted over with healthy granulations.

July 7. Still going on favorably. Wound measured only *nineteen square inches*. On the 22d it measured only *twelve square inches*; the denuded bone is quite covered with healthy granulations.

July 30. Wound diminished to *nine square inches*.

Aug. 7. The wound to-day measures only *seven square inches*, being only one-fifth of its original size two months since. The whole of the new skin, with the exception of about half an inch surrounding the wound, is as completely covered with hair as any other part of the uninjured scalp. The patient continues to be doing well, and is actually gaining flesh, and in a very few weeks will have completely recovered from the accident.

CASE III. *Scalping, and a novel operation for recovering the denuded cranium.*

Dr. Felix Robertson, the President of the Trustees of the Medical department of the University of Nashville, was the first male child born in this city. In retiring from the presidency of the Tennessee State Medical Society, April, 1855, he delivered an address, of which the following is an extract, taken from the *Nashville Journal of Medicine and Surgery*, vol. viii., 1855:—

On the 11th of January following (1781), they had evidence that the aid of surgery might be useful to them. On that day he who now addresses you was born, and David Hood, in passing from the lower to the upper fort, was fired on by Indians in ambush at the sulphur spring, in the northern part of

the city. He was pierced by three balls, and fell on his face, apparently dead. The Indians rushed on him and scalped him, and stamped him on the back of the neck to dislocate it, and left him, believing he was dead. He lay perfectly still for a long time, as it seemed to him, and, when he believed they had gone, he cautiously peeped about, and could not see them. He then got up, and slowly wended his way toward the upper fort, a most pitiful-looking object, as you may imagine; but what must have been his horror when, getting near the top of the bank, he saw the whole company on the hill but a few steps from him. He said he saw their white teeth as they laughed outright at his strange figure. He turned and tottled back as fast as his little strength enabled him, some four or five firing at him as he turned back, two balls wounding him slightly. They did not attempt to pursue him, and after passing down the ravine a little way, his strength entirely failed him, he crept into the brushwood, and lay there until men went out from the forts and found him, and conveyed him in. My father reached home late that night, from a trip into Kentucky, and early next morning went in to see Hood, expecting to find him, if not dead, a very forlorn case. On inquiring of David how he was, he replied, "Not dead yet, and I believe I would get well if I had half a chance:" my father told him he should have a whole chance—and David did get well, and lived to a good old age. My father had seen many persons who were scalped in East Tennessee, and had there learned from a travelling French surgeon how to treat them. *This was to perforate the outer table of the skull with a shoemaker's awl over the whole naked surface, making the perforations very close together.* Through these perforations, granulations sprang up, and gradually spreading, finally all united and formed a covering to the denuded skull, before it should die and exfoliate, and thus expose the brain. I am sorry that I cannot recollect the name of the French surgeon who introduced the practice, for he deserves to have his name immortalized for the great boon he bestowed on the frontier settlers of that day. This operation became, in time, so common that there were persons in every fort who performed it.

CASE IV. *Hypertrophy of the scalp relieved by excision.* By M. Robert, of Paris. *Journal de Chirurgie—Lancet, 1843, vol. xlv.*

A young lady, eighteen years of age, and of a sanguine temperament, was affected with a disease of the scalp that at first attracted no particular attention. It had first appeared (in an inflammatory shape) about her fifteenth year, but was at that period repressed by an especial attention to cleanliness. When about sixteen years of age, however, the patient began to find, that in combing her hair the comb was impeded by a fleshy ridge extending from one side of the head to the other, and which increased daily, till she was obliged to have a part of her hair cut off, being unable to comb it. She now consulted a surgeon, who states that all the scalp above a semicircular line on either side, stretching from the occipital protuberance round to the parieto-frontal suture, was extensively hypertrophied. As felt above the ears, the scalp was thickened and soft, and pitted readily under the pressure of the finger; and the thickening and softening augmented towards the crown, where the skin seemed to be detached from the cranium, and had a convoluted aspect, its sulci being filled with a sebaceous secretion of a nauseous quality.

M. Robert, the surgeon who reports the case, proposed the operation of partial *scalping*, to which he proceeded on the 1st of October in last year. The head having been for the most part shaved, he began the incision about one inch and a half above the left mastoid process, directed his bistoury upwards and forwards across the parietal eminence to the sagittal suture, and then returned to the corresponding point on the opposite side of the head.

The bistoury, without being removed, was now directed round the back of the head across the occipital bone, below its superior angle to the first point of departure, and all the tegumental structure comprised between these incisions was removed. The hemorrhage was at first extremely abundant, but soon ceased on the application of cold lotions and the formation of a coagulum. The sides of the wound were approximated by a few sutures: charpie was the sole dressing employed. Twenty-four hours afterwards a violent febrile access took place, with headache, vomiting of bilious matters, fainting, &c., but vigorous bleeding was resorted to, and these symptoms gradually diminished; at the end of about a week the wound had entirely cicatrized. The mass removed was about eight inches in length, by three in breadth; in its thickest part it was seven inches thick. Hairs were but thinly scattered over it, but in nowise differed from the hairs on other parts of the scalp. At present we learn that the scalp of the patient is thicker than normally; but it everywhere adheres to the bone, and is nowhere particularly salient.

SECTION II.

INJURY, (CHIEFLY) FRACTURE OF THE CRANIUM.

CASE I. *The great elasticity of the skull in a child—a wagon passing over it without material injury.* Boston Med. and Surg. Journal, 1847.

Practised anatomists are eloquent in their osteological comments upon the carpentry of the skull. Who that has listened weeks in succession to lectures on the bones, does not recollect how much is said on the arrangement of the arches in the interior of the cranium, which gives it great power of resistance; in short, were the framework of the head constructed upon any other principle than the one nature adopted, such are the shocks and blows to which it is constantly exposed, the wall would be frequently broken, and the functions of the brain destroyed. But no lecture-room demonstration, however ingeniously illustrated, hypothetically, can compare with the following fact: "A few days since," says the *Amherst Express*, "a son of Mr. Dudley, of Shutesbury, Mass., about five years old, accidentally fell from a cart containing about twelve hundred pounds weight, which passed directly over his head. He received no apparent injury except a slight bruise near the ear made by the wheel."

CASE II. *Derangement of intellect caused by sabre cuts on the head.* The noted case of Col. Blucher. *Lancet*, 1830, vol. xxix.

In the month of April, 1814, the author (M. Bieske) was called on to attend Colonel Count Blucher, son of the celebrated Prince of that name. The patient labored under a tendency of blood to the head, and was troubled with hemorrhoids. The symptoms were easily removed by bloodletting and purgatives, and the patient returned to the amusements of Paris, where he was then stationed; in a short time, however, he again began to complain of tightness and pain about the head, with impossibility of sleeping. The pulse was now quick and full; the skin warm and dry; the inflammatory symptoms were removed by mild diaphoretics and a warm regimen; however, a little confusion in the ideas seemed to remain after the recovery of the patient from this slight attack. Dr. Bieske considered this symptom, which was soon joined by a return of anxiety, insomnia, and tightness of the head, as depending upon *hypochondria*, and hoped, both by acting upon the abdominal cavity and by sulphurous baths, mineral waters, and relief of the patient's mind, to obtain a complete cure. He took this opportunity of examining the state

of the wounds which Colonel Blucher had received some time before at the battle of Dresden. They were healed, but the cicatrices still betrayed the extent and nature of each injury. One sabre wound existed near the junction of the occipital and right parietal bones; it was excessively deep, and had probably penetrated through the inner table of the skull. A second sabre cut, on the left parietal bone, seemed more superficial; a third, near the junction of the parietal with the frontal bone, on the right side, was also deep, and had probably penetrated into the cavity of the skull. There was also a cicatrix on the neck from a lance wound, and a second on the right side of the chest; this latter had penetrated deeply into the substance of the lungs, as was shown by the violent hæmoptysis and other symptoms which accompanied and followed the wound. The patient, thus severely wounded, and taken prisoner, was brought into Dresden, where he was attended and cured by Baron Larrey, Dr. Ohle, &c. Colonel Blucher was now exchanged for a French General; his health seemed fully established, and he followed the allied army amidst all the fatigues of a winter campaign from the Rhine to the walls of Paris.

In the month of May, 1814, the patient left Paris, with the intention of taking mineral baths, but was prevented by some indisposition; he also now conceived the strange idea that he was possessed of a secret which would preserve the kingdom of Prussia from all dangers, and that his neighbors were constantly at work either to force this secret from him, or to deprive him of life, and discover it in his entrails. It was impossible to convince the patient, by any moral reasoning, of the folly of the ideas by which he was possessed; his physician, therefore, ordered some compound tinct. of bark, with tinct. of rhubarb and wine. The patient now, for a short time, thought himself cured, but his irregular ideas soon returned, and it became necessary to hold a consultation of the most eminent physicians in Berlin; their prescriptions, however, were not followed by any beneficial result, and the patient continued to regard them as fiends and persecuting demons. Dr. Bieske, who still preserved some share of the patient's confidence, hoped to obtain an amelioration, by acting on the intestinal canal, and by exercise; yet it was impossible to overcome the morbid mistrust which constantly occupied his mind; in the intervals of lucidity, he often complained of confusion in the head, vertigo, and sparks crossing the eyes.

Here we cannot help remarking on the obstinacy of his medical attendants, in attributing all these symptoms to hypochondria, instead of turning their attention to the state of the brain, which had evidently suffered from the wounds received at the battle of Dresden. Far from pursuing an antiphlogistic treatment, the opposite method was pursued with a fatal perseverance; thus (to resume our author's history of the case) Dr. Bohn, one of the attending physicians, advised him to drink champagne; under the stimulating influence of which beverage, he felt himself comfortable for a short time; but, on the following night, the patient was very uneasy and agitated, and the attacks of vertigo were excessively violent; the pulse was now full and hard; the face and eyes were much injected; the circulating system was greatly excited. Dr. Bieske ordered some blood to be drawn from the arm, but the patient obstinately refused; he was, therefore, obliged to apply twelve leeches, and recommend a more cooling diet. The patient now felt much better, his appetite returned, and, faithful to the ordinance of Dr. Bohn, he drank *every day* a bottle of champagne!

The baneful effects of such treatment were not long without manifesting themselves; the vertigo again appeared with excessive violence, and M. Bohn was compelled to order venesection, with a cooling diet, and the use of sul-

phur. After the abstraction of some blood, and the administration of a few doses of sulphur, the patient found himself much relieved; however, the sudden change from champagne to cold water inspired his mind with fresh distrust; he now refused every kind of medicament, determined on treating himself, and for this purpose made a journey on foot into Silesia, from which he returned in eleven days much more ill than he set out.

The patient's state now seemed very serious, and a fresh consultation of the Berlin physicians was called by Prince Blücher. On the 14th of November, 1814, the patient was examined with care, and the physician-general gave it as his opinion that the disease had no connection with the wounds received at the battle of Dresden, but consisted in an aberration of the intelligence, which would best be treated by occupation, and the effect of moral agents. These latter, however, had no influence on the disease; the patient became so unruly and distrustful, as to endanger his own life and that of others; he often walked about at night with loaded arms, once challenged a superior officer in duel, who, he imagined, threw some shade on the glory of his father. A medical examination of the patient again took place, in consequence of this circumstance; a decided opinion of mental derangement was given, and the duel of course prevented; this enraged him to such a degree, that he formed the resolution of insulting, or even killing, his adversary, whenever he might meet him. This design was frustrated by proper precautions, and the impossibility of avenging his honor had such an effect on the unfortunate patient's mind, that in the midst of a breakfast given to his friends, he fired a pistol loaded with ball into the left side of the chest near the clavicle; the wound, although dangerous, was not mortal; the bullet did not penetrate through and through the chest, but seemed to remain lodged under the left scapula; the hæmoptysis and other symptoms evidently showed a wound of the lungs, of which, however, the patient was completely cured. It is unnecessary to go through the various methods of treatment by turns proposed, but all fruitlessly; confined at one time, at another allowed absolute liberty, the patient was at length sent under proper care on a journey into the neighborhood of the Rhine, but returned after a lapse of a year without any benefit.

He now lived without observing any regimen; appetite good; slept well, and seemed to enjoy excellent health. However, he seemed frequently to suffer in the head; the hand was constantly carried to the forehead or head, and the patient at these times expressed his suffering by crying, "Oh, God, my head" (O Gott, mein kopf). His folly now became of an absurd kind; he believed, not only that his food and drink were poisoned, but that a portion of his strength was removed each time the hair was cut, and hence refused to be shaved or have his hair cut; he also conceived that a part of his secret was contained in his excrement, and always satisfied nature in a remote and unfrequented place, after which he carefully buried the precious deposit.

In this melancholy state the patient survived, without any remarkable change, from the year 1814 to the 10th of October, 1829. The author does not make any allusion to the symptoms which immediately preceded death. The body was examined on the 11th of October.

Autopsy. External examination.—A deep cicatrix, two inches long, on the right parietal bone; a second of similar extent near the junction of the parietal and occipital bones on the right side; a third cicatrix one inch and a half over the left parietal bone; on the body a large cicatrix adherent to the second and third ribs on the left side of the breast near the clavicles; behind, near the twelfth dorsal vertebra, two cicatrices; above the right elbow-joint, a transverse large cicatrix adherent to the os humeri; the

fingers of the right hand, except the thumb and index finger, were contracted, and united together by cicatrices; on the outer side of the left calf a round cicatrix, which seemed to have resulted from a gunshot wound; a second over the left knee-joint, from a penetrating wound. On removing the skull-cap the dura mater was found to be united to the bone more closely at the points corresponding to the wounds; the anterior one had evidently penetrated into the cavity; the posterior cut on the right parietal bone had also penetrated, but not that on the left side. The whole anterior surface of the hemispheres, superiorly, was covered with a whitish firm layer, about the thickness of a knife-blade, and similar to that produced by inflammation. The base of the brain presented nothing abnormal. On dividing the substance of the brain the white matter was found somewhat injected, and the ventricles contained a little more fluid than usual. The cerebellum healthy.

In the cavity of the chest the lungs were closely united to the costal parietes; in the midst of the substance of the left lung, opposite the third and fourth ribs, was found a leaden bullet, which appeared in several places as if it had been cut with some sharp instrument. The third and fourth ribs had been evidently fractured inwards, and were united in an obtuse angle by bony deposit. The examination of the other organs revealed nothing worthy of notice.

The cause of the lesion of intelligence in this curious case, was evidently a chronic inflammation of the membranes covering the cerebral hemispheres. Unfortunately this cause was completely overlooked by the physicians who attended Colonel Blücher, and a treatment was adopted which was rather calculated to aggravate than to allay the morbid irritation of the sensorium. This is the more remarkable, as the French surgeons who treated the patient in 1813, after the battle of Dresden, expressed their fears that at some future time the wounds of the head might give rise to a derangement of the intellect. The length of time (sixteen years) during which a large musket-ball remained imbedded in the substance of the lung without giving rise to any symptoms, is also another curious circumstance.

CASE III. Moral insanity caused by a depressed fracture—cured by an operation. By Dr. Robertson. *Lancet*, 1846.

Robert Driver, aged twenty-three, a sailor, was admitted into the Dunstan Lodge Asylum, in February, 1845.

Ten years previously he fell from the mast of a ship; the fall was followed by an attack of acute mania. On his return home he became more and more ungovernable in his temper and violent in his conduct. He also suffered from frequent pains in the part of the cranium on which he fell, and which he imagined were caused by his mother beating him.

After being some time in this asylum this delusion gave way, and the intellectual powers of his mind remained sound; but his conduct continued ungovernable, and his language abusive, and kind words made no impression on his wayward temper. He still complained of pains in the injured part. On examining his head, a very distinct depression was discovered on the posterior superior margin of the right parietal bone, the situation to which he referred the pain.

In consultation with Mr. Furness, of Newcastle, consulting surgeon to this institution, it was decided that the depressed portion of skull be removed by the trephine.

On the 3d of January, the operation was skilfully performed by Mr. Furness. The patient bore it well, and the wound healed without a bad symptom. The portion of the cranium removed was healthy in appearance on both

of its surfaces. It adhered very firmly to the dura mater, requiring considerable force for its removal. It was altered considerably in form, appearing to have been indented rather than fractured, which is not improbable, seeing the accident occurred to the patient when only thirteen years of age.

His conduct is now, and has been since the operation, in every way improved. He has had no bursts of passion, answers civilly when spoken to, and is grateful for the relief afforded him. He looks forward with pleasure to his return home, which will take place as soon as the weather improves. He has for the last fortnight been working on the farm, and states that since the operation he has been free from pain in the head, under which he formerly labored.

CASE IV. A rifle discharged while blowing into it; the ball passing through the upper jaw-bones, nose, between the eyes, fracturing the cranium and lodging under the skin near the left superciliary ridge. Patient fully recovered. Ohio Med. and Surg. Journal, 1849.

Dr. William Lindsay, of Donnelsville, has sent us an account of a case of gunshot wound that occurred in his practice some years since. On the 27th of Nov., 1844, he was called to see the young man who was the subject of the accident, a son of Mr. Jacob Snider. While blowing into a rifle which he firmly believed was not loaded, he had the temerity to place his foot or great toe upon the hammer of the lock, and springing it, the piece exploded. He immediately fell, as though dead, but soon recovered the use of his faculties and limbs. On examination, it was found that the two front incisors of the upper jaw were gone, and that the ball, entering there, had passed upwards, almost exactly in the median line, that is to say, the ball entered the socket of the right incisor, with a slight inclination to the left, perforated the septum, and, entering the frontal sinus, made its appearance under the skin and periosteum, about three-fourths of an inch above the superciliary ridge, and a few lines on the left of the median line. The skull was fractured by the outward passage of the ball, but the brain did not seem to be at all affected. There was some hemorrhage from the mouth and nose, and an oozing of blood from the inner canthus of the left eye. One tooth was discovered and removed from the wound some days after the accident; the other was not found. Small spiculæ of bone came from the wound at intervals, and, some six weeks after the accident, Dr. Lindsay removed a portion of dead bone from high up in the left nostril. The ball was, of course, removed, and with it the "patch," and the wound properly dressed. No untoward symptoms occurred, and the young man speedily recovered.

The only remarkable circumstance about this case is the very fortunate direction and lodgment of the ball. Had the young man's head been in almost any other possible position, he must have been instantly killed. As it was, the ball kept so near the median line as to avoid all important vessels, nerves, and organs. It probably did not enter the cavity of the brain at all, else there would have been more disturbance of the cerebral functions. The young man had a most fortunate escape.

CASE V. Gunshot wound at the base of the skull; ball lodged in the ethmoid bone; patient doing well. Lancet, 1855.

On the 3d of February, 1855, a man was brought into St. Bartholomew's Hospital, deluged with blood, who had shot himself. His age was thirty, and he could give no information to the surgeon, Mr. Skey. He was very violent, bled profusely, and seemed in every way unmanageable. It was long before a proper examination could be made, when a large, round, jagged wound or

opening was discovered under the chin, going through the frænum of the tongue and jaw, lacerating and tearing these parts. On further examination, the ball or slug was discovered to have passed at the back of the palate, and had become lodged in the spongy portion of the ethmoid bone. Up to the present—now a week ago, the ball has not been removed, nor is it possible, perhaps, without doing much damage, to remove it. A very remarkable peculiarity about the external wound was its immense size—as large, perhaps, as a five-shilling-piece. All the muscles in this case—the genio-hyoid, genio-hyoglossus, &c.—were torn across, and left gaping—a view corroborated by the fact that the man at present opens his mouth or pulls down the jaw most awkwardly. Mr. Skey has more than once tried to remove the ball from the ethmoid, and for this purpose used much dexterity, and a little armory of a dozen instruments—screws, probes, forceps, &c., but all to no avail. The patient, however, has had no squinting, no brain symptoms, no paralysis or hemiplegia, which leads one to believe any essential part had been destroyed, though it appears little less than a miracle how he escaped.

CASE VI. *Most extensive fracture of the cranium—the case of the Duke of Orleans.* British and Foreign Medico-Chirurgical Review, 1842, vol. xxxvii.

On the morning of the 13th of July, about a quarter after eleven o'clock, the Duke set out for Neuilly to join the King and Queen there, before starting to take the command of the camp at St. Omer.

He was in a low four-wheeled carriage—called a Daumont, and which is like a large open cabriolet—a groom being seated behind. It was drawn by two spirited horses. On leaving the Barrière de l'Etoile, the horses, especially the leader—(were they harnessed tandem-fashion?)—became rather unruly, and the driver gradually lost command over them. Wishing to give himself more space, he turned them to the right into the avenue de la Revolte, which is in a line with the St. Denis road. The Prince, observing him to deviate from the usual route, called out to his postilion; but he, although he heard the Prince speaking, could not distinguish what he said. It was probably at this time that the Prince stood up to see how things were going on. He leaped or was thrown out, and immediately fell, striking his head with great violence on the curbstone. Two gendarmes, who happened to be on the road at the time, and the owner of an adjoining small grocery shop, ran to the spot, and lifted him up. They at once recognized who it was, and immediately carried him into the shop.

While they were carrying him, he vomited the food he had taken at breakfast; this, it is well known, is a common symptom attending injuries of the head. The royal patient was stretched out upon two mattresses on a low bed, in a back room: this was about half-past eleven o'clock. On the first news of the accident, a number of medical men hurried to the spot. M. Pasquier, first surgeon to the King, and his son, the surgeon of the Prince, soon arrived: MM. Blandin and Blache followed almost immediately afterwards. Alas! it was but too evident from the first moment that the case was a hopeless one. We may readily conceive the grief of M. Pasquier (the son), who had for many years enjoyed the confidence of the Prince, had accompanied him and never left his side in Africa, and who, before being appointed his surgeon, had been his instructor in medicine. For the King, who has always wished that the education of his sons should be very complete, had made the Prince—then Duke of Chartres—study anatomy, physiology, and a little of surgery.* For six months he dissected, under the instruction of

* Louis Philippe himself studied anatomy, and the simpler operations of surgery, as bleeding, the application of bandages, &c., under Desault.

M. Pasquier, at the Hôtel des Invalides. Perhaps this was one reason why he was always so partial afterwards to military surgeons. He had seen them at their humane labors in the field of battle in Africa, where, as everywhere else, they always proved themselves to be, as he beautifully said, "men of science and brave soldiers."

The loss of the Prince to the medical officers of the army will long be deeply felt.

Revenons.—The Prince was stretched out on his back, his head resting on his chest, in a state of complete insensibility and muscular powerlessness. A young German did the pious duty of supporting the head of the Prince, during the five hours that he survived. The breathing was deep, slow, and laborious; the pupils were dilated and unaffected by light; and the mouth and ears contained some blood. The pulse was small, thread-like and compressible. On examining the head, no depression or irregularity could be felt; but it was too apparent that irreparable mischief had been done to the encephalon, and that the case was one of cerebral commotion of the third and last degree, in which scarcely a single hope of recovery can be entertained. Cooling lotions were applied to the forehead, and vapor of ammonia and other stimulants to the nostrils; but all in vain; not an appearance of consciousness was shown, but every now and then involuntary movements of different parts occurred.*

It was now about noon; and at this time the King arrived, accompanied by the Queen, Madame Adelaide, the Princess Clementine, and followed by Marshal Gérard, and Generals Athalin, Gourgaud, Rumigny, and M. Delessert. The Queen threw herself on her knees at the side of the truckle-bed, where lay her unfortunate son. Never did a mother's grief and desolation break forth in more heart-rending expressions. In the midst of this scene of despair, the King alone mastered his anguish.

The state of the patient became worse and worse. Sixty leeches were applied near the base of the cranium. It was about this time that he uttered a few unconnected words in German.† He tried, too, to tear the leeches off, as if they caused him pain. Sinapisms were applied.

The breathing became more noisy, irregular, and oppressed, and the twitching movements of various parts became stronger. The lower extremities, which hitherto had been quite motionless and flaccid, became affected with a general tremor, followed by irregular, convulsive contractions. Gradually these movements became less frequent, and at length ceased, leaving the parts in a state of almost tetanic rigidity. The breathing became more and more stertorous, and the pulse became more feeble than ever.

During the whole of this time, the Queen was kneeling at the side of the bed, supplicating the Almighty to grant her dying son one moment of consciousness, and offering her own life as the price of such a mercy. Around her stood the members of her family, in a state of the most distracting despair. The grief of the young Dukes, Montpensier and d'Aumale, was most affecting; the latter constantly exclaiming, "Oh! when Joinville hears of this!" The

* These movements had taken place some time previously, after a bleeding that had been performed before the arrival of M. Pasquier. The propriety of such a practice in cases of violent commotion of the brain is more than questioned by the best surgical authorities: it must necessarily increase the already existing depression of the vital exertions.

† The words could not be made distinctly out. It may be that the image of his wife visited his thoughts in this hour of darkness, or that he was calling to one of his German valets, who were in the habit of waiting upon him, and whom he was in the habit of addressing in their own language.

King looked on this scene of affliction with a resignation which was even more touching than the louder sorrow of the rest.

M. Pasquier applied the cupping-glasses—*scarifiées et seches*—on the trunk, and limbs; and hot sand was applied to the soles of the feet, and sinapisms to the ankles. The pulse rose somewhat for a few minutes; but this slight change soon ceased. At two o'clock, the curate of Neuilly, whom the Queen had called for repeatedly, arrived to administer extreme unction to the dying Prince.

The convulsive movements of the limbs became gradually more violent; the muscles appeared to be affected with a continued spasmodic agitation. The breathing became more and more difficult, the pulse at the wrist ceased, and that of the carotids could, about three o'clock, scarcely be felt. All the usual symptoms of approaching death—the pale visage, the purple lips, the half-closed fixed eyes, the rattling breath—succeeded. More than once it was thought that the Prince was dead; at length one deep sighing inspiration was heard, and all was over. This was at half-past four o'clock.

The clergy were introduced and all present fell upon their knees. Never was there a more impressive scene. In a poor back room of a small grocer's shop were to be seen the King and Queen, the Princes and the Princesses, of France, with the ministers of state and of religion, all kneeling around the humble bed on which lay the corpse of him who was the heir to the throne, while the clergyman repeated the prayers for the dead. It was difficult indeed to say which was the most affecting of the two; the sobbings and the tears of the broken-hearted mother, or the silent scarce-restrained grief of the father, in this most trying moment of deepest affliction.

Autopsy.—This was performed by M. Pasquier, the son, forty hours after death, in the presence of General Baron Athalin, first aide-de-camp of the King, and the following medical men, MM. Fouquier, first physician to the King, Pasquier, Moreau, Blache, Blandin, and Destouches. There were marks of a contusion on the right cheek and right side of the forehead, also on the back of the left hand, on the front of both knees, and on the left hip. There was a broad sanguineous swelling over the back part of the head.

Cranium.—The integuments being divided from before backwards along the median line, the soft parts over the occiput and thence to the forehead and temples were found to be infiltrated with blood: the infiltration was considerable in the posterior portion of the occipito-frontalis muscle. The two flaps of integuments being folded down on each side, the saw was applied in the usual place, and the cranial bones divided. The violence of the blow, with which the head came against the ground, must have been extreme, as we may judge from the severity of the injuries inflicted. The lambdoidal, the left squamous and mastoid, the sphenoid, and the two sphenopetrous sutures, were all partially disunited. The cranium was fractured in numerous places. One fracture, beginning at the right side of the lambdoidal suture, passing a little above the posterior and inferior angle of the parietal bone, and extended into the temporal fossa, as far as the great ala of the sphenoid. Another, starting from the left side of the same suture, divided the parietal bone, from behind forwards, along one-half of its length, and had also separated the squamous portion of the temporal from the rest of this bone. The squamous suture being disunited, this portion of the temporal bone was quite isolated, and adhered only to the soft parts. A third fracture divided in a transverse direction the sphenoid bone on the level of the sella turcica.

On removing the calvarium, the anterior and inferior portion of the cerebrum, as far back as the fissures of Sylvius, was found reduced to a reddish pulp or detritus. There was much sanguineous effusion under the arachnoid

membrane : a few drops also of bloody serosity were found in the ventricles. One of the optic nerves was fairly divided across. All the other organs of the body were perfectly sound, with the exception of the lungs, which were so much gorged with dark blood that their tissue almost resembled that of the spleen.

CASE VII. *An iron breech-pin remaining in the cranium twenty-six days without producing death.* London Medico-Chirurgical Transactions. North American Med. and Surg. Journal, 1828, vol. vi.

Mark George, æt. 19, was wounded on the forehead, by the bursting of a gun, on the 10th of July, 1825. He was able to walk some hundred yards immediately after the accident, but at length, *overpowered* by the loss of blood, he fell and shortly after became convulsed, and was totally deprived of his senses. [Were the convulsions, &c., the effect of the loss of blood, or of effusion within the cranium?] The external wound being enlarged, exposed an orifice, about the size of a crown piece, in the frontal bone, just above the centre of the left superciliary ridge, through which a considerable quantity of the substance of the brain was oozing, and as much as a tablespoonful adhered to the hair and surrounding integuments. No foreign substance or spicula of bone was discovered. The wound was lightly dressed, and the patient bled to ℥xvj with advantage. Next morning would answer questions. Took cathartics.

July 12. Symptoms favorable. Pulse, although not exceeding forty, was tense and full. V.S. ℥xvj . Cathartics.

July 13. Pulse quicker and softer. No fever. Seems quite rational. A poultice applied to the wound; a small pledget of cerate was placed over the orifice in the bone.

July 21. Little change in the symptoms since last date. Now some irritation and febrile heat. V.S. ℥xij . Cold ablutions with vinegar and water.

July 22. Improved. Wound dressed as before. Fætor very great, and discharge copious. Surrounding parts have a healthy aspect.

July 27. Discharge continued very abundant and symptoms very favorable until this day; has now some pain in the head; greater reluctance to answer questions; stiffness of the lower jaw; bowels costive.

July 28. Bowels relieved by a purgative; is better; the stiffness of the jaw gone off.

July 29. Takes more nourishment; still some sense of choking in the throat and difficulty in swallowing; a little inclination to drowsiness, but is perfectly sensible: pulse sixty, soft and regular; discharge from the wound is profuse.

August 1. No difficulty of deglutition; took a draught of port-wine and water, broth, &c.

Aug. 2. Discharge profuse and strength lessened, but by improving the diet and giving cinchona, no other unpleasant symptom followed.

Aug. 4. A foreign body was discovered in the cranial opening, but so impacted as not to be removed by the forceps.

Aug. 5. By means of a trephine elevator and a forceps, the foreign body was removed, and proved to be the *iron breech-pin* of the gun, three inches in length, and exactly three ounces in weight, of an irregular shape, cylindrical at one extremity, the other pointed. It had thus remained under the cranium for twenty-six days.

Aug. 16. No bad symptoms supervened; some small portions of bone have been discharged. Was this day removed to his own home, about a mile distant, without injury.

Aug. 25. Cavity filling up. Able to sit up. This boy continued to improve without any unfavorable symptoms of mind or body. Small portions of the bone exfoliated occasionally as late as the 20th of November. On the 10th of December he is reported as in good health. The sight of the left eye is totally destroyed, but that of the right remains perfect. The smell and hearing are both perfect, and his memory and other mental faculties have not been evidently impaired. There does not appear to be any difference between the two sides of the face and head in point of sensation or power of motion.

CASE VIII. *The breech-pin of a gun remaining imbedded in the ethmoid and sphenoid bones eight years.* London Medical Times and Gazette, 1853.

This remarkable case was communicated to the New Castle and Gateshead Medical Society, in the last session, by a military surgeon, whose name is not given.

An officer, 32 years of age, serving in the island of Ceylon, in the year 1828, while in the act of firing at an elephant, with a cut-down musket of the old description, was knocked down by the bursting of the piece. He lay insensible for some time, but, being alone, was uncertain how long, and, on the return of consciousness, found himself wounded in the forehead, the *debris* of the musket lying about him. He was, however, able to get on his feet; and, on assistance arriving, and search made, most of the shattered fragments were forthcoming, but the *breech*, which was nowhere to be found, until after the lapse of several days, when it was ascertained to have been the cause of the wound, and that it actually remained imbedded in the skull. In the course of about three months the patient had recovered sufficiently to resume his duties; the wound in the forehead remaining open, but being protected by a covering of black plaster. So matters rested for a few months more, when the pointed portion of the iron breech made its way through the palate, together with the head of the screw by which it had been secured to the stock, and which was still loosely inserted through its proper hole in the iron, as they had together been torn from the woodwork. They had continued to descend gradually lower and lower, so that the point of the iron was almost in constant contact with the tongue, by which its edge was worn smooth and polished. As will be naturally concluded, a profuse secretion of pus was kept up; this was generally most offensive, requiring the greatest attention to cleanliness, and a consumption of lint and tow somewhat enormous; despite all which, the discomfort of the sufferer was occasionally added to the engendering of maggots within the wound. It was on one of these occasions, eight years after the accident, that I first saw the case, and had, from the officer himself, a statement, of which the preceding is a summary. The worms were at this time got rid of by stimulating injections, but not without great pain. The wound in the forehead was triangular, with a base about half an inch long, just above the *ossa nasi*, and from its centre to the apex was a full inch. Within was seen, horizontally placed, and level, or nearly so, with the base, the circular end of the iron; while, as before mentioned, the other end, with the head of its connecting screw, had now descended very low through the opening of the roof of the mouth, the small end of this screw being situated in the right nostril, and easily twirled by the thumb and finger, applied to the opposite one in the mouth. There had been a great desire to get away this screw, but, though so loose, there was not space to admit of its being withdrawn; to obtain which, an ingenious attempt had been made, some months previously, by Mr. Elliott, a young surgeon, to saw off about half an inch, thus reducing its length to an inch and a half; and he had

nearly succeeded, when obliged to desist, from the suffering caused to the patient, but who expressed his intention to submit to a further trial at some subsequent date. The attempt, however, was never repeated. On the evening of March 25, 1836, after the excitement of a mess dinner, with much conversation and some rather loud singing, in which this officer bore a conspicuous part, while leaning over to one side, his chair slipped from under him, and he came to the floor in a sitting posture, but did not at the time appear to have sustained any hurt, though it was scarcely to be expected that such a concussion, with a large foreign body in the head, and in such close proximity to the brain, could take place without consequences of a serious and dangerous tendency. The next day, headache and general pyrexia came on, and rapidly increased with evident vascular determination to the brain, delirium ensued, and death closed the scene on the 2d April, the seventh day after the fall. Eight hours after death the head was examined. The brain and its membranes were in a high state of vascularity, and a small abscess was found in the anterior lobe of the right hemisphere, very thinly separated from the orbital plate of that side, and connected with a dense membrane that supplied the deficiency occasioned by the absorption of a triangular portion of the cribriform plate of the ethmoides, this adventitious membrane being, of course, the only medium of separation between the brain and the cavity containing the iron, which, on removing the membrane, was brought into view, but was only fully exposed by a horizontal section of that part of the os frontis, below the superciliary ridge and orbital plate, with the necessary vertical one to complete the separation. The cavity formed of the ethmoidal and sphenoid cells, the inner bony structure of which had been removed by absorption, had a black appearance, and a fetid sulphurous odor; the iron was now removed without difficulty by the bullet forceps, had a black charred appearance, with a strong odor of gunpowder, and, when cleared of its adherent impurities, weighed (including screw) *within a drachm and a half of three ounces*; length, $2\frac{1}{2}$ inches; and its greatest transverse diameter one and three-sixteenths of an inch. The screw was exactly two inches in length.

CASE IX. *A stiletto projecting twelve years into the brain.* American Journal of the Medical Sciences, 1833.

In the pathological collections belonging to the Hospital Santa Maria Nuova, at Florence, there is a portion of a parietal bone in which the point of a stiletto is projecting through the inner table nearly an inch. This was found so at the patient's death. The scalp had healed over it, and the injury occurred twelve years before the patient's death.

CASES X. and XI. *Fractures with great depression, &c.; patients fully recovering.* Transactions of the American Medical Association, vol. iv.

Prof. Joshua Flint, of Louisville, Ky., has seen a case of injury to the brain inflicted by a hammer. A disk of the bone was driven by the head of the instrument into the cerebral substance, breaking it up extensively; and, without even removing the bone, the patient fully recovered, and remains well at the end of more than two years. In another case of fracture of the cranium occurring at sea, the depression was so great that the sailor, after his recovery, was in the habit of amusing his friends by dancing with an egg in the depressed place.

Similar cases are also mentioned by the late Mr. Hennen in his *Military Surgery*.

Dr. Hennen has recorded two cases, fully proving the correctness of Mr.

Abernethy's opinions about the impropriety of using the trephine in cases of depression unattended with urgent symptoms. In one of these instances, the upper and posterior angle of the parietal, which had been struck by a musket-ball, was depressed exactly *an inch and a quarter from the surface of the scalp, yet no bad symptoms followed*, and, with the aid of bleeding and other antiphlogistic remedies, the soldier recovered perfectly in a few weeks. "In a similar case, where the man survived thirteen years, with no other inconvenience than occasional determination of blood to the head on hard drinking, a *funnel-like depression to the depth of an inch and a half* was formed in the vertex."

CASE XII. *The head transfixed by a ramrod.* Chelius' Surgery, by South, vol. i.

A young man was ramming down the powder in his fowling-piece, with an iron ramrod; the gun went off, and the ramrod struck the head of a person a few paces distant, and, entering a finger's breadth by the side, and as much above the outer corner of the eye, at the root of the zygomatic arch, passed through the teguments at the back of the head, at the posterior superior angle of the parietal bone, a finger's breadth from the sagittal suture, and as much above the superior angle of the occipital bone. The wounded man immediately endeavored to pull the ramrod out, but ineffectually; but one of his companions at last pulled it out, as straight as when it left the maker's hands. He lost little blood, and only at the apertures of the wound, which healed quickly and completely by simple but proper treatment.

CASE XIII. *Removal of the crista galli for fracture of the cranium.* Patient lived six days. By Paul F. Eve, M. D. Nashville Journal of Med. and Surg., 1852, vol. iii.

Saturday evening, the 13th December, 1851, I was requested by Drs. Watson and Conwell, of Nashville, Tennessee, to see with them Mr. John P——, who had just been severely injured by a fall. Our patient was about forty-five years old, weighed one hundred and eighty pounds, had been drinking, and was on his return home, when his horse becoming unmanageable ran away, dashing him out of his buggy, when his head struck against a telegraph pole. This occurred about two miles out of the city, and Mr. P. was taken into a small tavern by the wayside.

We found him at 9 P. M. laboring profoundly under symptoms of compression of the brain. Blood was still flowing from his nose some three hours after the accident; there was an incised and an extensive contused wound on the forehead; fracture of the os frontis could be distinctly felt through the envelops of the cranium; and the pulse was down to forty-four strokes in the minute.

It was decided to proceed at once to elevate the depressed bone. In doing this no trephine or saw was required, so extensive were the fissures, and twelve pieces of the bone were removed. Both tables of the os frontis, the groove upon its internal surface for the longitudinal sinus, the frontal sinuses, the superciliary ridge of the left orbit with its notch for the frontal nerve, the foramen cæcum, and the foraminæ, for the internal nasal nerves with the *crista galli*, are all distinctly seen in the fragments extracted. Seizing the latter piece with forceps as it was found loose, and withdrawing it, the patient became sensible, complained and struggled violently, declaring we were tearing off his nose and pulling out his left eye. Immediately after the operation, the hemorrhage from the nostrils and the symptoms of compression ceased. His pulse went up to sixty-two, and the patient conversed rationally

The usual treatment for fractured cranium was pursued in this case. The weather was very cold, so much so that the wetted cloths to his head froze when not in contact with the skin. The patient was uncontrollable, and to evacuate his bowels would get out of bed, and walked into an adjoining room. In doing this he struck his forehead.

On the third day it was found absolutely necessary to move the patient a distance of two or three hundred yards. He continued doing well until the fourth day, when inflammation supervened, and he died on the sixth day after the operation.

Without entering into any speculation as to what might have been the result in this case, it does appear that the patient was in a fair way of recovering with the loss of the crista galli.

Depression of the skull in infants relieved by cupping.—I have heard of no less than three cases of depressed skulls in young children relieved by exhausting the air from a cupping-glass placed over the portion of the cranium driven below the surrounding level. One instance occurred in Europe, the second is recorded by Dr. Moultrie, of St. Johns, South Carolina; and the third was mentioned to me by my colleague, Prof. Briggs, of this city.

SECTION III.

INJURY OF THE BRAIN.

CASE I. *A patient apparently deprived, for more than a year, of all power of the mind, volition and sensation by a fall, cured by the trephine.* Sir Astley Cooper's Lectures in the Lancet, 1826, vol. i.

A man was pressed on board of one of his Majesty's ships, early in the late revolutionary war. While on board this vessel, in the Mediterranean, he received a fall from the yard-arm, and when he was picked up, he was found to be insensible. The vessel soon after making Gibraltar, he was deposited in a hospital at that place, where he remained for some months, still insensible; and some time after he was brought from Gibraltar, on board the Dolphin frigate, to a depot for sailors at Deptford. While he was at Deptford, the surgeon under whose care he was, was visited by Mr. Davy, who was then an apprentice at this hospital. The surgeon said to Mr. Davy, "I have a case which I think you would like to see. It is a man who has been insensible for many months; he lies on his back with very few signs of life; he breathes, indeed, has a pulse, and some motion in his fingers; but in all other respects he is apparently deprived of all powers of mind, volition, or sensation." Mr. Davy went to see the case, and, on examining the patient, found that there was a slight depression on one part of the head. Being informed of the accident which had occasioned this depression, he recommended the man to be sent to St. Thomas's Hospital. He was placed under the care of Mr. Cline; and when he was first admitted into this hospital, I saw him lying on his back, breathing without any great difficulty; his pulse regular, his arms extended, and his fingers moving to and fro to the motion of his heart; so that you could count his pulse by this motion of his fingers. If he wanted food, he had the power of moving his lips and tongue; and this action of his mouth was the signal to his attendants for supplying this want.

Mr. Cline, on examining his head, found an obvious depression; and thirteen months and a few days after the accident, he was carried into the operating theatre, and there trephined. The depressed portion of bone was elevated from the skull. While he was lying on the table, the motion of his fingers went on during the operation, but no sooner was the portion of bone

raised than it ceased. The operation was performed at one o'clock in the afternoon; and at four o'clock, as I was walking through the wards, I went up to the man's bedside, and was surprised to see him sitting up in his bed. He had raised himself on his pillow. I asked him if he felt any pain, and he immediately put his hand to his head. This showed that volition and sensation were returning. In four days from that time the man was able to get out of bed, and began to converse; and in a few days more he was able to tell us where he came from. He recollected the circumstance of his having been pressed, and carried down to Plymouth or Falmouth; but from that moment up to the time when the operation was performed (that is for a period of thirteen months and some days), his mind had remained in a state of perfect oblivion. He had drunk, as it were, the cup of Lethe; he had suffered a complete death, as far as regarded his mental and almost all his bodily powers; but, by removing a small portion of the bone with the saw, he was at once restored to all the functions of his mind, and almost all the powers of his body.

This patient had his skull fractured in 1799, and was operated on in 1800, thus passing unconsciously from one century to another; and, respecting whom, the story is told that he completed, in a hospital of London, the sentence he had commenced on board of a man-of-war in the Mediterranean, the difference in time being a century.

CASE II. *A grape-shot lodged upon the brain successfully extracted.* By Baron Larrey, Napoleon's great surgeon. From Dr. Rivinus' Translation of Larrey's Memoirs on Wounds, &c., 1832.

During the battle of Witepsk, in 1812, a young Russian soldier had been struck by a Biscayan at the frontal region, a little above the right eyebrow; the ball afterwards had pierced and fractured the os frontis, and penetrated into the interior of the cranium, where it lodged against the apex of the right anterior lobe of the brain, against the orbital projection of the os frontis and the internal crista of the same bone. Notwithstanding the size of its volume, it was but very little perceptible on the outside; the opening to be perceived measured no more than three or four lines in diameter; the attempts and efforts to extract it had, therefore, proved ineffectual.

When I saw the patient, he felt a sensation of restraint and an extremely unpleasant heaviness in the head, which constantly obliged him to sit up and support his head on his knees, for whenever he raised it upwards and backwards, he would faint away. The tap of the probe upon the visible part of the foreign body convinced me that it was an iron ball, the size of which must greatly exceed the diameter of the opening through which it had entered, and that consequently it could only be extracted by the application of the trephine.

The wound of the integuments, having been dilated by two longitudinal incisions, exposed the whole circumference of the opening into the frontal bone, upon which we applied three small trepanning crowns which communicated between each other and the hole made by the Biscayan; after cutting off the angles of bone which they had left standing, it was an easy matter to extract, with a strong pair of forceps and an elevator, the iron ball, which weighed not less than six ounces (and which has since been deposited in the cabinet of the School of Medicine at Paris). By means of a wooden scoop we evacuated entirely a large quantity of coagulated blood, and extracted several small fragments of bone which proceeded from the fracture of the superior wall of the frontal sinus. The vacuum, thus resulting from the loss of so much bony matter, was filled up with a portion of fine sponge, previously moistened and wrung out again, and held by a thread so as not to suffer its

internal side to sink below the level of the margin of that large opening. The borders of the wound were covered with a fine perforated linen rag, spread with cerate; soft charpie, compresses, and Galen's bandage completed the dressing.

From that moment the patient found himself relieved, and enjoyed a comfortable sleep for nearly two hours; however, towards evening he had some heat, fever, and a smart pain in the wound. A copious depletion was made from the vena saphena, and the patient was put upon diluents and anodyne antispasmodics. The dressing was not renewed until the fourth day after the operation, at which time every part of the bandage was soaked through with sero-purulent matter. The next day I found him in a most satisfactory condition, and without the least disturbance of the functions of sensation. Some time afterwards, his recovery had become complete, with the exception of the depression near the cicatrix, and the vacuum still perceptible on account of the loss of substance of the frontal bone. This cure was announced to me at Moscow by M. Roussel, the surgeon-major of the hospital.

CASE III. *Gunshot wound; the ball resting on the os ethmoides; patient lived three and a half months.* By E. D. Cone, M. D., of Hillsdale, Michigan. *Peninsular Journal of Medicine*, 1854.

May 30, 1854, was requested to see Mr. A——, aged about 30, sanguine bilious temperament, of regular habits, and a cooper by trade, who was reported to have been shot by Mr. —, and supposed to be dying.

Accompanied by my friend, Dr. J. P. Randall, I repaired to his boarding-house, to which he had been conveyed in a state of unconsciousness.

On seeing the patient, it was found that his face and forehead were blown full of powder, and that there was a considerable swelling and ecchymosis of the upper lid of the left eye; and upon close examination it was observed that the ball (about the size of a buck-shot), fired from a small pistol, had entered between the lids at the *inner canthus* of the left eye. We succeeded in passing a probe directly backwards about half an inch, and from thence, by curving it, obliquely, upwards and inwards about two inches, until the ball was distinctly felt, resting on or near the upper surface of the ethmoid bone. In passing the probe, fresh blood issued from the mouth and nostrils. From the oblique direction the ball had taken, and the nature of the parts through which it had passed, it was deemed impracticable to attempt its extraction; the result, therefore, was left to nature. In about two weeks, by the use of cold applied to the head, and the exhibition of cathartics, alteratives, and diaphoretics, low diet, &c., he so far recovered as to be enabled to walk about the streets; but soon thereafter, on resuming labor at his occupation, he was suddenly seized with violent pain in the head, together with all the symptoms of inflammation of the brain, which however readily subsided by using treatment therefor, and he was soon able to be about again. I may remark that he had repeated attacks of symptoms of inflammation of the brain, always induced by attempting to labor at his trade, but which yielded to treatment, until the evening of the 17th of September following, when he succumbed to a similar attack about eleven o'clock.

Autopsy on the 19th.—At the request of the prosecuting attorney, and accompanied by my friends, Dr. A. Cressey and Mr. A. Whelan, I proceeded to make an examination of the body. After removing the calvarium, the brain was found to be highly congested, the anterior lobes softened, underneath which, and resting on the os ethmoides, was found the ball very much flattened, together with several fragments of bone, the longest of which was about half an inch square, but oval in shape. The ball and fragments were

enveloped in about two ounces of greenish pus. The dura mater in the vicinity of the ball had ulcerated.

The points of interest about this case I consider to be, the length of time he survived after the reception of the injury, the repeated attacks of inflammation of the brain and its membranes which so readily yielded to treatment; and the amount of pus that had collected without sooner producing more marked symptoms thereof, especially as the ball and fragments of bone were in close contact to the brain as foreign substance. I may remark that he continually complained of a *dull heavy pain in the region of the ball* during the intervals of his attacks, at which times it would become *excruciatingly severe*, with great external heat, &c. &c.

Although disconnected with the surgical interest of the case, I may observe, that the affray occurred in consequence of jealousy (as is believed), and that although the perpetrator claimed it to have been an accident, yet he was indicted for murder, and upon trial was convicted thereof and sentenced to the state prison.

CASE IV. *A ball entering one temporal region and coming out at the other; patient lived twenty-nine days.* Académie de Médecine de Paris. London Lancet.

Dr. Blaquière, of Mexico, forwarded the details of a gunshot wound, involving the anterior cerebral lobes, which presented considerable physiological interest. A child, playing with a loaded pistol, accidentally discharged it. The ball struck his younger brother, four years and a half old, entered at one temporal region, came out at the other, and finally spent itself against the wall of the room. For six-and-twenty days after the accident, the child retained the entire control of its intellectual faculties; the memory and judgment were not in the least impaired; the child was as gay as before the accident, had appetite for food, and slept tolerably well. The wounds were both situated about an inch and a half below the external commissures of the eyes. On the twenty-sixth day, symptoms of cerebral inflammation appeared, and the child died on the twenty-ninth. On examination, the anterior and superior region of the two hemispheres was found to have been traversed by the ball. The ventricles were intact. The entire sinus was the seat of suppuration; the meninges were inflamed. M. Blaquière considers the case to be fatal to phrenological doctrines, as the seat of several important phrenological faculties was destroyed, and yet no functional lesion whatever of the brain was observed.

CASE V. *A rifle ball shot directly through the head; patient recovered, but has acquired some peculiarities.* By David Rice, M. D., of Leverett, Massachusetts. Boston Med. and Surg. Journal, 1849.

Henry W. Richardson, aged 14, son of Francis Richardson, of Leverett, on the 28th of September last, received a severe gunshot wound in his head. A considerable portion of the substance of the brain was traversed by the ball, but the boy has now quite recovered. I deem the case of sufficient importance to be reported, being, in my opinion, a rare and interesting one. The circumstances connected with, and leading to, the accident, are as follows:—

George, an elder brother, was in the house loading a rifle, preparatory to firing at a target, at some distance through an open window. Henry was at the barn, unloading a cart, and not being aware of danger, ran to the house, in a footpath leading directly by the window from which George was about to fire his rifle. He passed by it just as the piece was discharged, the ball

entering his head when within two feet of the muzzle. He fell lifeless, and was supposed to be quite dead for nearly an hour. He was carried into the house and laid upon a bed. I saw him for the first time in the evening, about four hours after the accident. I found him comatose, extremely pallid, the whole surface of his body and extremities cold and clammy, pulse hardly perceptible, and the breathing discernible only by close observation. I found that the ball had *passed directly through his head*, as considerable portions of brain were hanging both at the entrance and exit of the shot. I proceeded to shave the hair from around the external wounds, and to apply a *temporary* dressing, supposing that the lad would probably die before morning; but on visiting him again at sunrise, I found, much to my surprise, that he was still alive, and that the powers of life had considerably rallied. I removed the dressings, examined the wounds more accurately and removed several comminuted fragments of bone, with shreds of membrane and brain, that hung from the injured parts in view.

He remained entirely unconscious for six days after the injury. The left side of the body was completely paralyzed up to this time. On the seventh day, the swelling of the scalp having subsided, I ascertained, on examination, that the skull was considerably fractured and broken up, at the place of exit of the ball. I made a crucial incision through the scalp at this place, dissected up the corners, and removed, with an instrument, several pieces of bone that had been partially broken off from the skull by the force of the shot, and were making some pressure upon the brain.

From this time the boy evidently began to amend. His bowels were easily moved by cathartics; whereas before, there had been but little action, and it was with difficulty that a stool could be procured. His pulse and breathing assumed a more favorable aspect, and gradually became natural. He had an evident relish for food, and began to talk. The paralyzed portion of his body, from this time, rapidly regained its normal action. In four weeks from the accident the wounds had completely healed, and the boy could walk about the house and converse with his friends, although there was as yet but little strength in the left side of his body.

The only dressing applied, through the whole course of treatment, was simple strips of linen, secured over the wound with adhesive plaster. These were changed as often as they became loosened. The head was wet freely with brandy and water, and a solution of sugar of lead. The bowels were kept open with castor oil and a decoction of senna. The diet consisted entirely of fluids for the first fortnight; after that, he was allowed more nutritious food.

The anatomical facts as to the boundaries of the injury are as follows: The ball (sixty-seven weighing one pound) entered the head in the right temple, about one inch above, in front of the ear, passing through the lower part of the frontal suture, a little above its junction with the sphenoid bone, and passed out at the back part of the head, through the lambdoidal suture of the same side, a few lines below its apex. The distance from one wound to the other was about five inches and five-eighths.

These measurements show that the ball must have traversed nearly or quite five inches of the *substance of the brain*. The boy is at the present time quite well, although he has some peculiarities that he did not have before the injury. He has a slight stoop in his shoulders, goes with his head down, and is more inclined to mirthfulness.

CASE VI. *Gunshot wound of the brain; the ball lodged; patient perfectly recovered.* By O. C. Gibbs, M. D., of Perry, Ohio. Med. Counsellor, 1855.

In the fall of 1849, Mr. A. T——, aged about twenty-four years, was, it is supposed, accidentally shot in the head by a rifle ball, the ball entering about midway of a line drawn from the angle of the eye to the top of the ear. He was discovered, it is supposed, about an hour after the accident. When discovered, he was busily engaged in the vain effort to rise to his feet, falling invariably before getting into an erect position. He was but partially insensible, trying to reply to questions, but always vaguely, indefinitely and irrelevantly. We saw him several hours after, in connection with our friend, Dr. Beardsley, and found him much as above described. The probe would pass in the track of the ball, in a horizontal direction, full two and a half inches. It was supposed, the ball was lodged in the bones at the base of the cranium, but from its point of entrance, and its horizontal direction, the conclusion was hardly avoidable that it lay in the cerebral substance. The patient was placed in a dark room, light and noise excluded, and perfect quiet enjoined. After a little considerable reaction took place, accompanied with considerable mental excitement, but under appropriate treatment it quietly subsided in a few days, and the patient slowly convalesced. With the exception of some slight mental impairment, and partial hemiplegia, the recovery was complete.

It is now six years since the accident; the patient's health is good, no irritation is produced by the ball, and excepting the slight hemiplegic condition, and still slighter mental impairment, the patient is as well as before the injury.

The patient has always claimed that he swallowed the ball, and utterly repudiates the idea that he still carries it in his head. The instantaneous suspension of consciousness simultaneous with the occurrence of the accident, deprives his opinion of any weight. There is nothing peculiar about this impression. The writer was once rendered unconscious, for about an hour, from a cerebral injury, and he received, during that time, many impressions, and was seemingly a participant in many transactions which, to this day, though twenty years since, seem as real as any occurrences in life. Though accidentally knocked down with a club, the impression has always been as vivid as the most conscious reality, that he fell against a stump!

But there is another reason for supposing the patient's opinion is incorrect, and the ball not swallowed. If the ball had glanced downward into the fauces, more or less hemorrhage from the mouth and nose must have taken place, which was not the case.

The main point of interest in this case is, that a foreign body of its size should remain so long in the head without giving evidence of its presence. We believe it is not common for any foreign body to remain long in any part of the system, without producing more or less disturbance. It would certainly be interesting to know exactly at what point the ball is lodged, and how nature, ever ready to provide for contingencies, has protected from injury the delicate organs in the locality of the foreign substance.

CASE VII. *Two balls lodged in the anterior portion of the brain; great loss of its substance; change in the character of the patient.* Bulletin de la Société de Médecine de Gand. Southern Med. and Surg. Journal, 1837.

The subject was a young man, aged 16 years, habitually melancholy, reserved, and of an obtuse intellect. Without cause he believed himself to be deceived by the woman whom he loved, and by whom he believed himself to be loved; naturally timid, and not being able to revenge himself, he resolved to commit suicide and make use of the pistol. *Two balls penetrated the anterior*

part of the brain, by the same opening, and made such destruction as to *bring away a quantity of cerebral matter*, equal to *two cupfuls* of the ordinary size, and to permit the introduction of a gum-elastic probe to the depth of four inches, without meeting with any obstacle. The patient was unconscious of anything that passed for twenty-four hours, when he revived, was able to move himself, and sensible of what passed, but had lost his sight. The wound readily healed, a large quantity of cerebral matter coming away at each dressing. On the 27th day, the wound was entirely healed, although neither of the balls had been extracted. But what was most extraordinary in this case, was the change wrought in the character of the young man. He became intelligent, gay and loquacious; he seemed to have forgotten his misfortune, and often played the wag with his guides. With this subject the sense of odors had lost none of its acuteness, but he never regained his sight. He returned to his parents, but on the fifth month after the injury he was taken with convulsions, of which he was relieved by bleeding. Convulsions now occurred frequently, and he died at the end of about two years.

The frightful destruction of cerebral matter in this young man, caused no manifestation of mental derangement. And it is certain that the balls penetrated not only very deeply into the brain, but that the wound was situated in the middle of the frontal bone, and beneath the left frontal protuberance, the direction of the wound was such as inevitably to destroy the left anterior lobe. How can phrenologists, who consider this part as the exclusive seat of the understanding, properly so called, explain these facts? It is true that the anterior lobe of the right side might have been sufficient to supply the office of the diseased side, as it probably was not injured. But even adopting this idea, which has been promulgated by Gall and Spurzheim, and adopted by many since their time, it is still necessary to account for the evident improvement which took place in the intellectual functions. We sometimes see individuals, who, after pleurisy, live with one lung, but their health is feeble and attended with suffering, and never is respiration more vigorous in these subjects.

—We regret much the meagre character of the above report. We should, at least, have had with it the post-mortem appearances to make it satisfactory.

CASE VIII. *Ball lodged in the brain.* Hennen's Principles of Military Surgery.

Favre, a chasseur of the Imperial Guard of Napoleon, who had fought at Borodino, distinguished himself most gallantly on the field of Waterloo. No mounted British soldier was enabled to unhorse him on that day; but he at length fell amid a shower of musket-balls, one of which penetrated his left temple at the junction of the three sutures. With the symptoms which immediately followed I am not acquainted, but, from the history given by Favre himself to the medical officers in attendance, staff-surgeon Laisne, and my friend Dr. Knox, who favored me with the heads of the case, it was obvious that he had lain insensible for three days and nights, and that violent inflammation had taken place before he was brought into the British hospital.* The entrance of the ball, and its course within the brain, were very evident to the eye and probe. In October, four months after the battle, this man was alive, and, without any constitutional injury, or disturbance of any one function, was performing the part of an assistant and orderly to his less fortunate comrades. A small suppurating sore, but discharging moderately, then remained in the site of the wound, and he felt occasionally some giddiness and headache. Favre, like many other people, was not content with his good

* The Gens d'armes at Brussels, Division 1.

fortune, but wished *something to be done for him*, and prevailed upon a young man to apply a bit of caustic to his wound, to remove a small papilla of fungous flesh, and dry up the discharge. Severe pain and corded feeling of the head, with hot and dry skin, bounding pulse, suppression of discharge from the wound, and in short, every symptom of alarming fever, soon made their appearance, and this at a period when low fever and erysipelatous inflammation spread over every wound in the hospital, and rendered the use of the lancet questionable, if not hopeless. However, by means of steady purging, and other active measures, he recovered in four days, leaving an impressive example of the danger of ignorant interference. He returned to France with his recovered comrades shortly afterwards. Before he left the hospital, the vision of the eye on the wounded side began to fail, and, to an accurate observer, the power of the muscles of the eye and of its lid, particularly the levator, appeared to be impaired. In expressing his gratitude to his attendants for their humanity, and for the perfect cure he owed to their attention, he observed, "so little inconvenience did he feel, that, could it benefit the Emperor, he would willingly receive a ball in the other side."*

CASE IX. *A ball penetrating the os frontis, removed from near the lambdoidal suture by the trephine.* By Baron Larrey. Cooper's Surgical Dictionary, by Reese.

In the 2d vol. of this work (p. 139), the reader will find the account of a soldier, who was struck on the middle of the forehead with a ball which penetrated the os frontis, and then passed obliquely backwards, between the skull and the dura mater, in the course of the longitudinal sinus, as far as the lambdoidal suture, where it stopped. Larrey traced the situation of the ball, by the introduction of an elastic gum catheter into the opening; and measuring the distance between the fracture and the place where he felt the ball, he cut down upon that part of the skull, beneath which he concluded that the ball was lodged. The bone was then perforated with a large trepan; *a good deal of pus was discharged*; the ball was extracted, and the patient recovered. One thing here merits the attention of surgeons: Larrey tells us, that a good deal of pus issued as soon as an opening was made in the skull; there must then have been suppuration under the bone, and inflammation and detachment of the dura mater—circumstances always indicated, according to Pott, by a corresponding separation of the pericranium, and a puffy tumor of the scalp. Did these symptoms take place in the foregoing case, so as to be of any assistance to Larrey, in judging of the place where the ball was lodged? and has the mention of them been omitted only by accident? or are we to infer that suppuration may happen between the cranium and dura mater, without any detachment of the pericranium and puffy tumor of the scalp? a thing which Bichat asserts is proved by daily experience in the Hôtel-Dieu, at Paris. (See *Œuvres Chir. de Desault*, t. ii. p. 29.) Larrey, in his 3d vol. (p. 82), gives us another case, in which a ball pierced the left parietal bone, and lodged near the lambdoidal suture. Its situation was detected with the aid of an elastic gum catheter, and partly in consequence of there being a slight ecchymosis over the part. Here a crucial incision was made through the scalp, and a small fissure discovered. As the symptoms of compression in-

* A very interesting case of this kind is given by Mr. Kirby in the *Dublin Hospital Reports*, vol. ii. p. 303. In the *Bulletin de la Faculté de Médecine*, No. 10, for 1812, M. Langlet gives a case where a seven drachm ball remained for 18 months in the brain, a fact the more curious, that a sort of membranous envelop connected with the dura mater was thrown around it; by this singular disposition, the ball was in some measure suspended in the purulent matter which surrounded it.

creased, the trepan was applied, so as to include the fissure. A half of the ball, flattened, was found directly under the perforation, and a good deal of blood was voided from the two openings in the eranium. For a fortnight the case went on favorably, but the patient was then attacked with what Larrey terms hospital fever, but which in all probability was inflammation and sup-puration of the membranes of the brain, and died.

CASE X. *The head transfixd by a ramrod; patient survived two days.* The details of this case were communicated to Baron Larrey, by M. Caizergues, Surgeon-Major's Mate, during the campaign in Austria, and we take it from the translation, by Dr. Rivinus, of the Baron's Memoirs on Wounds, Injuries, &c.

On the 23d March, 1810, a private of the 61st regiment of infantry, having, in sport, shot at Christopher Cros, one of his comrades, in the fullest conviction that his gun was not loaded, the latter was thrown down, and had his head from the middle of the forehead to the left side of the nape of the neck, pierced through entirely by a large piece of ramrod which had been inadvertently left in the musket. The two ends of this ramrod, being of equal thickness, projected externally to the eranium, for about two inches. Notwithstanding this severe injury, Cros had retained sufficient strength to make the journey from the spot, where he had been wounded, to the ambulance (a distance of one league and a quarter), partly in a cart and partly on foot. There was no hemorrhage from the nose or ears, nor had any of the functions of the life of relation become disordered on the road.

After several trials to abstract this foreign substance by its anterior extremity, a piece, merely of about five inches in length, had been pulled out with the pincers used for that purpose; and from the broken surface it appeared that what is called a flaw had been the sole cause of its breaking off. Several further attempts to draw out the portion remaining within the eranium by its posterior fragment, had proved abortive, and it seemed even that the strongest pincers and the utmost exertions had been made towards the accomplishment of this object, for the fragment was bent and marked by the grip of the instruments. With the view, at length, to extricate or dislodge it more readily, it was thought best to apply the crown of a trephine as near as possible over the spot of the eranium from whence the ramrod protruded. Contrary to all the principles of surgery, and in spite of the danger of such an operation, it was performed on the margin of the occipital foramen, and within a few lines of the posterior condyloid foramen. It must have been necessary, therefore, to divide the thick layers of the trapezius, splenius and complexus muscles, with their bloodvessels and nerves, in order to reach the bone. M. Caizergues has said nothing of the difficulties which he must necessarily have encountered, nor of the phenomena which during and after the operation must have arisen; he merely states that it had been useless, and that he had been obliged to give up the extraction of the ramrod. He has, nevertheless, dropped the remark that this soldier, who expired on the 25th, two days after the accident, had borne the operation with the utmost fortitude, and that he had not even been deprived of his senses.

On examination after death, the real course of the ramrod and the parts injured by it were fully ascertained. The os frontis had been pierced through between the two sinuses, by making an opening of a round shape, without fracture [the meaning here must be, without spicula, for, of course, the eranium was *fractured*], and nearly of the diameter of the ramrod, which had originally passed in a horizontal direction between the two hemispheres of the brain, without injury to either of them, and lacerated only the point of

the falx. The iron afterwards had forced itself into the substance of the sphenoid bone, underneath the left optic foramen; it had then pursued its career through the extremity of the petrous portion into the cuneiform process of the occipital, by making an inclination towards the left condyloid apophysis of this bone, over which it had passed at its base; and, finally, it had appeared again through the posterior condyloid foramen.

Throughout its whole career, the ramrod had not wounded one important organ. It had not touched any of the lobes of the hemispheres of the brain; but had glanced under the carotid artery and the cavernous sinus, without injuring either, and even was found separated from this sinus by means of a lamina of bone, which it had almost detached from the body of the sphenoid; finally, it was found sufficiently remote from the third pair of nerves, as well as from the internal jugular vein.

It seems almost impossible for the ramrod to have taken the precise course indicated in the above description of this case. While, too, we condemn the application of the trephine to the occipital bone at the point mentioned, still every judicious surgeon will avail himself of all prudent means to extract foreign matter from the brain.

CASE XI. *Trephining an infant successfully, for fracture caused by a tenpenny nail entering the cranium.* By James L. Van Ingen, M. D., of Schenectady, N. Y. New York Journal of Medicine, 1854 (with a wood-cut).

Alfred, a child of Garret Van Vranken, of Schenectady, aged twelve months, while playing at a back door, which was guarded by a board placed against the casing, was precipitated, head foremost, down two steps to the ground, the board being first displaced, and the child impaling itself on a "tenpenny" nail, which was sticking in it. The nail entered the right side of the head, near the right parietal protuberance, and considerable force was required to remove the child from the board. The accident occurred at 6 P. M., Sept. 20, 1847. Professional assistance was sought in consequence of apprehension of danger, the child being apparently well.

At 7 o'clock P. M., I first saw the case. The pulse was frequent, but there was a total absence of any other extraordinary symptoms.

Upon an examination of the wound with a probe, I found that the nail had pierced the skull and membranes, and entered the brain to the depth of two and one-quarter inches, measuring from and including the scalp, which was normal as to thickness.

I left directions to have the child closely watched, and to be informed immediately should any alarming symptoms show themselves.

At midnight the child vomited, and had slight general convulsions, which lasted about half an hour, and then ceased entirely, their lack of severity not alarming the parents sufficiently to induce them to apprise me of the fact. The remainder of the night the child slept naturally, having neither stertor nor convulsions.

Sept. 21. At nine o'clock A. M., was called in consequence of the return of unfavorable symptoms. About this time the child commenced vomiting, and had convulsions of the left side of the body until about ten o'clock. At ten o'clock, there was paralysis of the muscles of the left side, except those of the face, which continued their convulsive action until half-past ten o'clock, when the child became insensible, and commenced sinking.

I then advised trephining to remove the small portion of bone displaced by the nail, which I regarded as the immediate and sole cause of all the unfavorable symptoms, acting simply as an irritant; but a consultation, which was called by the parents, decided that the operation was unwarrantable, and held out no reasonable hope of benefit.

1st. Because so small a portion of the bone as the end of the nail displaced could not produce such grave symptoms.

2d. That a child's brain could accommodate itself to infinitely more pressure.

And, 3d. The probable cause of the convulsions, depression, and sinking, was not the simple irritation of so minute a portion of the skull as had been displaced. Indeed, it was regarded as improbable that any displacement existed, for even if the inner table had yielded in the first place to the pressure of the nail, it was supposed that, from its great elasticity at so young an age, it had resumed its natural position. The symptoms were, therefore, attributed to the penetration of the nail to so great a depth into the substance of the brain.

Dr. Chas. Martin, at present attached to our naval medical service, differed from the opinion of the other physicians in consultation, and insisted that the operation held out not only the sole hope of recovery, but a rational certainty of such an event. These were my own views, but the other physicians persisting in their opinion, and the parents refusing to consent to an operation, Dr. Martin and myself were left in a minority, and we simply watched the progress of the case.

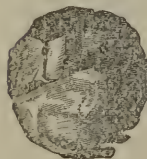
At 12 o'clock M., the skin was cold; there was no pulsation perceptible at the wrist, and but feebly at the carotids. I again urged the operation, and those who had opposed it now consented, because the child would **CERTAINLY DIE**, and *the operation would only shorten its life an hour or two.*

Operation.—The child was perfectly insensible, the breathing scarcely perceptible, and apparently it did not feel the incision in the scalp to expose the bone. When the bone was fully exposed, a small irregular opening was discovered, sufficient to admit the passage of the nail, the sides of which gradually approximated each other at the bottom, the nail having entered obliquely. Upon removing, with the trephine, the portion of bone represented in the cut (c), the depressed portion of both tables represented in the cut (b), was discovered, the degree of depression being irregular, from the oblique entrance of the nail. The appearance of the parts is very accurately and elegantly represented by the artist (Mr. Holton) in the cut (a).

Immediately upon the elevation of the portion of bone the child became sensible, the muscles of the left side of the face commenced twitching, then those of the whole left side of the body, and, immediately after, those of the whole body were affected with a slight convulsive movement; the pulse returned at the wrist, the heat to the surface, and the child had free use of its limbs, with the exception of the arm of the left side, which was partially paralyzed.



(a) (a) A lateral view of the portion removed, showing the actual amount of depression.



(b) (b) An internal view of the portion removed, showing the two small portions of both tables of the skull depressed.



(c) (c) An external view of the portion removed, being a portion of the right parietal bone near the parietal protuberance, showing the opening in the bone, caused by the entrance of the nail.

The wound was then brought together and dressed, the child removed to a dark and quiet room, to secure the brain from all disturbance, from light or noise, and then left with but one attendant. At 12 o'clock M., the child had a slight convulsion—(R. Sulph. morph. gr. 1-16)—and the remainder of the night it slept quietly.

Sept. 22. The day after the operation, the use of the left arm was perfect.

Sept. 28. The child was removed to the family room, and the wound healed entirely in about three weeks. No further medication was used after the morphine of the first night, subsequent to the operation, with the exception of one drachm of castor oil, and the application of rum and water to the head.

April, 1854. The child is healthy, has never had fits, spasms or spasmodic action of muscles since his recovery from the operation in Sept., 1847.

CASE XII. Extensive injury of the brain—a nail driven two inches and a quarter into its substance. By James Couper, Jr., M. D., of New Castle, Delaware. *American Journal Med. Sciences*, 1836.

On the 13th of September, 1835, at 10 o'clock in the morning, a son of Mr. Allen, of this neighborhood, three and a half years old, of full size and in perfect health, climbed to the top of a fence four feet eight inches in height, and when there lost his balance, and fell headlong upon the opposite side. On that side of the fence there happened to be a pile of weather-boards, which had been taken from an old building. One of them rested on the ground, and extended to the spot upon which he fell. It was so firmly fixed by the weight of boards above it, as to be incapable of yielding to the impulse of a body falling on it, and through the end of it, the sharp extremity of a stout wrought nail projected. In falling, the head of the child struck upon this nail. Its point entered the right parietal bone, just behind the central point of the right half of the coronal suture, and at the distance of half an inch from it. Its direction was, from the point of entrance, towards the centre of the basis of the brain, and the part of it which entered the skull measured two inches and a quarter. After the head had been driven close up to the surface of the board by the perpendicular force of the fall, the child fell over upon his right side, thus causing the point of the nail to describe a segment of a circle within the substance of the brain. The accident was first observed by a girl belonging to the family, who ran to the assistance of the child, and made several ineffectual efforts to relieve him by lifting up his body. Having failed in her attempts, she called to her aid a young man, who at first made like trials to release him, by raising his body from the ground. Defeated in these, he at last succeeded in extricating the boy from his distressing situation, by interlocking the fingers of both his hands beneath the head, and forcibly raising it off from the board. Upon the extraction of the nail, small portions of brain were found adhering to it, and other pieces afterwards came away from the wound. But little blood was lost—it amounted, perhaps, to two fluidounces, and came principally from a minute arterial twig belonging to the scalp. When I first saw the patient, which was within an hour from the time of the accident, he had fallen asleep, but was readily aroused by my efforts to clear away the blood from the wound, and struggled resolutely to escape from them. During the afternoon of that day, he vomited freely several times. At ten o'clock at night he was suddenly seized with total loss of power over the left side, but without any corresponding loss of sensation, or any paralytic affection of the tongue. His speech, both then and afterwards, was perfectly natural, as were also his eyes and the general expression of his countenance. Distinct attempts were made

by the system to set up inflammatory action within the cranium on the second, fourth, fifth, and seventh days after the injury, but these were readily defeated by prompt and efficient depletory measures. A slight discharge continued to flow from the wound for about a week, and then ceased entirely. The paralysis has passed off regularly, but slowly. At this time (five months from the date of the accident), although the child runs about as usual, and exercises constantly and very freely without difficulty, there remains a slight general weakness of the arm, with a degree of defect in the power of the flexor and adductor muscles of the thigh of the affected side. The treatment of this case, in which I was aided in consultation by Dr. Baker, of Wilmington, consisted in the diligent use of free general and local depletion, together with those other measures by which inflammation of the brain may be prevented or removed.

CASES XIII., XIV., and XV. *Three fatal cases of injury to the brain through fracture of the orbit.* Chelius' Surgery, by South, vol. i.

We have in the museum, at St. Thomas's Hospital, an example of fatal perforation of the orbital plate of the frontal bone, of which Astley Cooper gives an account, by a girl, aged twelve years, falling on a pair of scissors, the point of which entered between the eyelid and the forepart of the globe of the eye; on the scissors being drawn out some blood followed; the eyelid fell, and she was unable to raise it; she did not, however, complain much of pain in the orbit, and had no pain in her head. Up to the third day "she walked about without fatigue, but then soon tired. On the fourth day she was still free from pain, except a little in the eye, but could not see with the other eye. She still walked about the room with assistance." On the fifth day she was out in a coach, enjoyed the ride, though she could not see, and was in good spirits, but on returning home, "complained of fatigue, and went immediately to bed. At seven in the evening she was seized with convulsions in her limbs, and now and then her features were distorted. At twelve o'clock that night the convulsions left her, and her senses returned, which had been lost during the fit. She now, for the first time, complained of pain in her head, which she said was very violent and attended with a sensation of great weight. At nine o'clock on the morning of the sixth day the convulsions returned, and continued till her death on the following morning. On opening the cranium, a fracture was found in the orbital process of the *os frontis*, in which there was a hole large enough to admit the point of the finger. In the *dura mater*, opposite this, there was a corresponding opening, with a portion of bone in it; between the membrane and the bone some extravasated blood was collected. In the *pia mater* and brain there were also openings; upon the former there were some purulent appearances, in the latter there was an incipient suppuration, with inflammation extending into the ventricle." (pp. 295-6.)

Guthrie mentions two cases of similar injury. A boy was struck by his playfellow with the end of a thick iron wire, on the right eye, which blackened it. There was no external wound; but as there was some bloody chemosis at the upper part and inside, there was a probability of the wire having penetrated deeply, although the opening could not be discovered with the probe. He vomited shortly after, and for two days ate little, but did not think himself ill. He was then well purged, and cold water applied. Two days after he was complaining of sickness, headache, and pain over the brow, and looked ill. It was now suspected that the instrument had penetrated the brain, although the chemosis was in a great measure gone, and the eye was unaffected. He was bled freely from that temple with leeches, and freely purged with calomel and jalap. On the evening of the fifth day he was very

ill, and delirious and restless all night; on the next was stupefied; answered questions with difficulty and incoherently; had a very quick pulse, hot and dry skin; some convulsive twitchings of the face and arms; pupils slightly obeying a strong light, but not dilated. He was again bled freely; but his breathing became difficult; he fell into a comatose state, and died during the sixth night. The iron wire was found to have passed under the upper eyelid, between it and the eye, through the posterior part of the orbital plate of the frontal bone, and into the anterior lobe of the brain, which was softened at that part and bedewed with matter.

A woman was struck on the left eye with a tobacco-pipe. She pulled a piece of the pipe, which was sticking in the orbit, from a wound under the lid, between it and the upper inner part of the eye, which was uninjured. A probe could be passed some distance in the course of the wound. She complained of little but the redness of the eye and the bruise. She was bled and purged, and had no symptoms for a week, when she complained of having been very ill at night, with nausea, headache, and shivering, hot dry skin, very quick pulse, and the upper eyelid paralytic. She was then bled largely, and purged freely, but became delirious the same night, and died in two days after first complaining of serious illness. Half an inch of the red-waxed end of the pipe had gone through the sphenoid bone, by the side of the *sella turcica*, and lodged in the brain, from whence it was removed bedewed with pus, the brain being yellow and softened around it. Guthrie says he has also seen two similar cases in children, and terminating in the same way.

CASE XVI. *Deep penetrating wound of the brain made by a knife; recovery.* By Congreve Selwyn, M. D., of Cheltenham, England. *Lancet*, 1838, vol. xxxiv.

William Bishop, living at Hill Farm, Bosbury, Herefordshire, aged four years at the time of the accident (Sept., 1821), was eating his dinner, his plate being on a kitchen-chair; near him was another chair; he placed a foot on a bar of each chair; the chairs receded from each other, in consequence of the motion given to them while his limbs were extended. He fell, and the knife entered in the following manner:—

The father of the boy, at the time of the accident, told me that it required all his force to dislodge the knife from its situation. It was a common cheese-knife, about four and a quarter inches long in the blade, and averaging three-quarters of an inch broad. It entered in a direction nearly horizontal, to the depth of three inches and a quarter, entering the right orbit, immediately beneath the superciliary ridge, and penetrating (through the posterior part of the orbital plate of the frontal bone) the substance of the brain, injuring in its course the optic nerve, and the levator palpebræ muscle, or the motor filament supplying it.* The hemorrhage was very slight. After removal of the knife some portion of brain protruded; more was also discharged on the eighth day after the injury. He did not sleep for a fortnight after the accident, and was delirious during night. The treatment consisted in low diet; little or no medical treatment, and the application of strips of adhesive plaster to the wound, which was entirely healed in six weeks. There was never any exfoliation of bone.

The present state of the eye shows the globe to be sound and healthy in structure, though less prominent than the other. Its muscular actions are all correctly performed, excepting that of the levator palpebræ superioris.

* There is now ptosis, probably from paralysis of this muscle.

The *vision is entirely lost* in that eye. The pupil is dilated, and wholly insensible to the stimulus of light.

As regards the present state of mind, all the senses are perfect, excepting the vision of the injured eye. The memory is very defective. He is incapable of applying to any pursuit requiring mental activity. His disposition is irritable, especially after indulging in liquor, or after any unusual stimulus. He has occasional pain on the injured side of the forehead, and has once since had typhus fever. His bodily health is now good, and he has the free use of the superior and inferior extremities.

CASE XVII. *The breech-pin of a pistol lodged in the brain; the wound of the brain healing.* By J. M. Cunningham, M. D., of Sussex, England. *Lancet*, 1838, vol. xxxiv.

On the 2d of the last month, I was requested to visit Stephen Daw, ætät. 14 years, who was reported to have accidentally shot himself. I found him lying on the ground, bleeding profusely from a wound, directly over, and within three lines of the left superciliary ridge, and part of the cerebrum, to the extent of a tablespoonful, lying on the clothes under his head. The wound itself was of a circular form, evidently made by something that had penetrated to the brain, carrying before it a circular piece of the frontal bone, without fracturing it beyond its edge or injuring the surrounding integuments. I was told he had been *once* very sick, when he raised himself to the sitting posture without difficulty; but at the time I saw him he was in a state of collapse from loss of blood. It appears that when firing off a pistol, loaded with ball, it burst, the ball passing through a gate at which he was firing, and the pistol itself being dashed into pieces; the breech-pin, I felt satisfied, had entered and remained in the brain, although on probing as cautiously as possible I could feel no foreign body within reach; I had him, therefore, merely kept perfectly still, and saturnine applications placed on the forehead.

3. The bleeding, though occasionally recurring, is of no great extent; has had a convulsion during the night; lies perfectly quiet, and says he is in *no pain*, but sleepy. Continued the applications and gave an aperient.

4. The bowels have been moved freely; pulse not so compressible, but variable; skin hot, and cheeks flushed, otherwise much the same; the wound filled with a coagulum; puts his tongue out when asked to do so, but answers no questions. Applied cold poultices made of lead-wash and bread to the wound and gave him a fever mixture.

5. Feverish symptoms relieved; puts out his tongue as before, and made an observation respecting his food, saying they had put wine in his arrowroot, which was found to be correct; otherwise the same; continued the poultices and medicine. I may now say, that the wound in a few days threw off the coagulum, and at first discharged a great quantity of pus, which gradually lessened and appeared to heal as fast as a wound possibly could do. His strength seemed gradually to return; the pulse assumed a most healthy beat; he answered questions put to him and could see all around him very well. When asked where he felt pain he put his hand to the *back of his head*, but we never could get him to raise his head up. This state continued until the 24th, when he appeared rather suddenly to be sinking; on the next day he was perfectly comatose; and on the 26th he died, *just twenty-four days after the accident.*

Autopsy, four days after death.—On removing the upper part of the cranium the wound of the brain was found to have *perfectly healed*; the dura mater adhered all round the aperture in the skull, which had diminished to half its original size, so that at first I began to think my diagnosis had been

incorrect, but when I reached the ventricles I perceived the trace of a foreign body; a little further there was a good deal of disorganization from the formation of pus, and resting against the occipital bone and over the tentorium lay the breech-pin of the pistol, an iron screw, weighing *nine drachms*. Thus it will be seen that this poor boy lived *twenty-four days* after being shot directly through the substance of the brain, and Nature made so great an effort to heal the injury that I am led to believe, had the foreign body sufficient momentum to have passed through the occipital bone, that he would have recovered from it.

CASE XVIII. *A patient surviving with a most extensive loss of brain.* Lancet, 1839, vol. xxxv.

Just seven years to this time, I was sent for to attend a young man who had met with an accident in the extensive slate quarries of Mr. Ashton Smith, in this county; while stamping a rock the powder ignited, and the blast went direct to his face; both eyeballs were shattered to pieces, the scalp on the forehead very much lacerated, and above the inner canthus of the left eye was a small hole in the os frontis, fairly through into the brain; upon my arrival I found the person who attends the men at the quarries introducing a grooved director through this hole, and scooping the inside of the skull, bringing out some blackish sludge, and a good deal of brain, both cortical and medullary part. I must confess I had no great hopes of the patient's recovery, and thinking I could do no more mischief than had already been done, being also anxious to know if the brain possessed any sensitive power, I took the director, and passed it, in a direct line, until it touched the os occipitis opposite, and then turned it round into different parts; the young man, being quite conscious all this time, assured me it gave him no pain, and it was only at the hole in drawing out the instrument, that he did feel pain. It may be necessary to observe, there was no pressure of the skull on any part of the brain, and no fracture with the exception of the hole in the os frontis. After dressing the wounds, and giving general directions as to the after-treatment, I took my leave, and was not sent for again; the patient got well without any unfavorable symptoms, and it so happened I did not see him from that period until a few months since. The person already alluded to assured me he repeatedly introduced the director afterwards, but it was not at my desire; from the manner in which the instrument was used at different times, I am satisfied both the hemispheres of the cerebrum must have been broken down, and made a regular puddle of; notwithstanding, the young man has been in good health ever since, and not only that, but all the faculties of his mind are quite perfect, as well as his hearing, taste, smell, and feeling; his sight, of course, is totally destroyed. His neighbors have assured me that he is a sensible, shrewd young fellow, a good singer, and remarkable for his memory. I shall content myself by merely stating the facts of this case; what I have here adduced can be attested by living witnesses; the young man himself lives to tell the tale; his name is Griffith Jones; he resides at a small farm called Ty-du, within half a mile of the Old Inn, on the banks of the celebrated Lakes of Llanberis.

—We cannot but think there must be some exaggeration in this account. A post mortem examination may alone determine to what extent the cerebral substance was destroyed.

CASE XIX. *Severe injury of the brain—a child falling upon the nob of a chair-post.* By M. R. Griswold, M. D., of Goodwinsville, Virginia. *American Journal Med. Sciences*, 1837.

A son of William H. Jones, of Dinwiddie County, Virginia, aged about two years, well grown, fat and healthy, fell from the upper floor of a dwelling-house, and clearing the first flight of steps, was precipitated with great violence upon one of the sharpened extremities of an old-fashioned, round-post, rush-bottomed chair. The rounded nob of the back chair-post, which received the head of the child, had been whittled away and sharpened to a point, so as to resemble very much in length, shape and size, the finger of a large man. This finger-like extremity pierced the child's skull and brain to the extent of about one and a half inches, entering the temporal bone just above the tragus and just in front of the superior helix of the external ear.

After the force of the fall was thus broken, the body of the child lit upon a table that happened to be near. But so firmly transfixed was the head upon the chair-post that it drew the chair over upon the table and retained it there until the father of the child raised the chair and by force extricated the penetrating extremity from the wound it had made.

The substance of the brain was very much broken in upon. A portion of it was found adhering to the chair-post, and other portions were seen protruding from the flesh wound.

I saw the patient in less than an hour after the accident. He had lost a considerable quantity of blood from the rupture of the veins of the integuments, and was in a sound, apparently natural sleep. There were no symptoms of compression of the brain and none of concussion, except contraction of pupil and occasional vomiting and disposition to sleep. No treatment was directed at first visit, except rest and the application of lint to the wound. The next day, and for seven or eight days succeeding, there was high fever, attended with full, quick pulse, hot surface and great jactitation. Apprehending inflammation of the brain, a rigid antiphlogistic course was commenced and pursued; embracing, in its details, free venesection twice, active purgation daily, and cold applications to shaven scalp as indicated by excess of temperature there.

After the fever subsided, the wound which had been kept open all along by pledgets of lint, suppurated freely. This suppuration was promoted by appropriate dressings. The wound is now completely healed. The injury to the cranium and to the brain within appears to have been repaired by the inherent recuperative energies of the system. The portion of brain exterior to the skull, in part, sloughed away piecemeal, and in part discharged from the suppurating wound in the form of ichor or thin milk-like fluid.

Whether in older persons the "*vis medicatrix naturæ*" would accomplish so much, is a question I will not take upon myself to answer.

The child at this time is in perfect health, and in every respect, in good condition. There is no appreciable impairment of the intellectual faculties, nor was there any during the treatment.

CASE XX. *Fatal undetected injury of the brain from the point of a walking cane.* By George Anderson, M. D., Surgeon to the 12th Lancers. *Ranking's Abstract*, 1851.

Trumpeter Henry Grainger, æt. thirty years, was admitted into hospital on the 27th of February, 1851; he was seen at the morning visit, at 10 o'clock, by the assistant-surgeon, Dr. George, who found him in bed, and considered that his ideas were somewhat confused, but attributed this, in part, to indulgence in drink the previous night (the 26th), as on questioning the patient

as to what was the matter with him, he said that on the previous evening he had been fencing with a walking cane with some of his companions, and that he had received a blow on the nose, or a thrust from a cane in the face. On examination, a small punctured wound was observed on the left ala of the nose, which did not appear larger than the wound arising from a leech-bite; and at this time, though somewhat taciturn, he appeared perfectly sensible, and answered readily the questions put to him.

Fomentations to the wounded part, and aperient medicines, were the remedies prescribed, and no unfavorable symptoms supervened during that day.

At the morning visit on the 28th, he was considered as not better, nor as sensibly worse, though there was no doubt that he was at this time laboring under a considerable degree of stupor; yet no alarming head symptoms were manifest, and consequently no particular examination of the parts where the wound existed was made, and the only additional remedy prescribed was a cold lead lotion to the head and face, and the purgative medicine was repeated.

About 6 o'clock on the same evening I was called by the hospital-sergeant, who stated to me that Grainger was much worse; and though Dr. George informed me, at muster parade in the forenoon, that he could not account for the continued symptoms of drowsiness and stupor in his case, I certainly did not suspect, either *before* or *after* seeing the patient, that there had been any wound of the brain, much less that a foreign body had penetrated to that organ, and was firmly impacted in the patient's skull. When I first saw him this afternoon he was struggling violently with the attendants, who required to use force to keep him in bed; his breathing was stertorous, and he was puffing with the lips; the right eye was fully expanded or staring, and its pupil greatly contracted; ptosis of the left eyelid existed, and on raising the eyelid the pupil was found to be extremely dilated. He had passed a large quantity of urine in bed, and his bowels had been open since morning.

On questioning him, or rather calling him sharply by name, he would rise himself into the sitting posture, throw his arms about, and strike at, or take firm hold of any object within his reach.

I had considerable doubt and difficulty in determining on the immediate measures to be adopted, the history of the case being to me quite obscure, and the symptoms being urgent and most unfavorable. Though the pulse was not full or bounding, the action of the temporal arteries was exaggerated, and therefore looking only to present symptoms, I opened the right temporal artery, and though this was done effectually, I only obtained about a couple of ounces of blood from it. I then opened a vein in the arm, but did not obtain much more blood in this way. A large turpentine enema was then administered, and grain doses of calomel were ordered every hour or half hour. I left the hospital with very slender hopes that a fatal issue could be averted, and had not been much more than half an hour in my room when I was called to the hospital, but before I reached it the patient had expired, after a violent convulsion attended with great discoloration of the countenance. The fatal event occurred at about a quarter-past 8 o'clock on the evening of the 28th of February, 1851; and the features of the deceased appeared calm and not distorted, when I saw the body.

The autopsy took place sixty-three hours after death, on Monday, the 3d of March. On removing the calvaria the dura mater presented nothing abnormal, but when it was removed a considerable degree of chronic arachnitis was presented, and the pia mater was found to be very vascular. After dividing the falx cerebri the anterior lobes were raised, and, gradually proceeding backwards, we had got as far as the division of the optic nerves, when the scalpel struck suddenly on a metallic point or substance directed obliquely

upwards and backwards, and protruding into the cavity of the skull, close to the left side of the sella tureica of the sphenoid bone, and pressing or lying on the left optic nerve, or left side of the optic commissure.

The cause of the man's death was at once made manifest to myself and Drs. Carte and George, who were present at the examination, as the foreign body was evidently the brass point or ferule of a small walking cane. The point of it had pierced the left ala of the nose, at the junction of the cartilage with the bone, taking a direction upwards, backwards, and a little inwards; in its course it grazed the inferior and middle turbinated bones, passed through the great cell in the body of the sphenoid, breaking off and carrying before it the posterior clinoid process, and finally impinging upon, but not rupturing the membranes covering that portion of the anterior lobe of the brain in immediate relation to the optic nerve of the left side. Anatomically speaking, there was nothing to oppose the onward progress of the stick, for in fact it passed up the nostril, the only resisting part, after it entered the skin and cartilage, being the body of the sphenoid itself, which, in the present instance, was very slight, its walls affording almost no resistance, in consequence of their extreme thinness.

CASE XXI. *An iron bar (tamping iron) shot through the head. Patient recovered.*

This most extraordinary case has been reported by Dr. Harlow for the *Boston Med. and Surg. Journal*, and by Prof. Bigelow in the *American Journal of the Med. Sciences*, 1850, vol. xx.

The following is the history of the case, taken from the last named periodical:—

The accident occurred upon the line of the Rutland and Burlington Railroad, on the 13th of September, 1848. The subject of it, Phineas P. Gage, is of middle stature, twenty-five years of age, shrewd and intelligent. According to his own statement, he was charging with powder a hole drilled in a rock, for the purpose of blasting. It appears that it is customary, in filling the hole, to cover the powder with sand. In this case, the charge having been adjusted Mr. Gage directed his assistant to pour in the sand; and at the interval of a few seconds, his head being averted, and supposing the sand to have been properly placed, he dropped the head of the iron as usual upon the charge, to consolidate or "*tamp it in.*" The assistant had failed to obey the order, and the iron striking fire upon the rock, the uncovered powder was ignited and the explosion took place. Mr. Gage was at this time standing above the hole, leaning forward, with his face slightly averted; and the bar of iron was projected directly upwards in a line of its axis, passing completely through his head and high into the air. The wound thus received, and which is more fully described in the sequel, was oblique, traversing the cranium in a straight line from the angle of the lower jaw on one side to the centre of the frontal bone above, near the sagittal suture, where the missile emerged; and the iron thus forcibly thrown into the air was picked up at a distance of some rods from the patient, smeared with brains and blood.

From this extraordinary lesion, the patient has quite recovered in his faculties of body and mind, with the loss only of the sight of the injured eye.

The iron which thus traversed the skull weighs *thirteen and a quarter pounds*. It is *three feet seven inches in length*, and *one and a quarter inches in diameter*. The end which entered first is pointed; the taper being seven inches long, and the diameter of the point one quarter of an inch; circumstances to which the patient perhaps owes his life. The iron is unlike any other, and was made by a neighboring blacksmith to please the fancy of the owner.

Dr. Harlow, in the graphic account above alluded to, states that immediately after the explosion the patient was thrown upon his back, and gave a few convulsive motions of the extremities, but spoke in a few minutes. His men (with whom he was a great favorite) took him in their arms and carried him to the road, only a few rods distant, and sat him into an ox cart, in which he rode, sitting erect, full three-quarters of a mile, to the hotel of Mr. Joseph Adams, in this village. He got out of the cart himself, and with a little assistance walked up a long flight of stairs, into the hall, where he was dressed.

We omit the certificates, and give the medical evidence in the case.

Dr. Williams, of Northfield, Vermont, Dec. 4th, 1849, says: Dr. Harlow being absent at the time of the accident, I was sent for, and was the first physician who saw Mr. G., some twenty-five or thirty minutes after he received the injury; he at that time was sitting in a chair upon the piazza of Mr. Adams's hotel, in Cavendish. When I drove up he said, "Doctor, here is business enough for you." I first noticed the wound upon the head before I alighted from my carriage, the pulsations of the brain being very distinct; there was also an appearance which, before I examined the head, I could not account for: the top of the head appeared somewhat like an inverted funnel; this was owing, I discovered, to the bone being fractured about the opening for a distance of about two inches in every direction. I ought to have mentioned above that the opening through the skull and integuments was not far from one and a half inch in diameter; the edges of this opening were everted, and the whole wound appeared as if some wedge-shaped body had passed from below upward. Mr. Gage, during the time I was examining this wound, was relating the manner in which he was injured to the bystanders; he talked so rationally and was so willing to answer questions, that I directed my inquiries to him in preference to the men who were with him at the time of the accident, and who were standing about at this time: Mr. G. then related to me some of the circumstances, as he has since done; and I can safely say that neither at that time nor on any subsequent occasion, save once, did I consider him to be other than perfectly rational. The one time to which I allude was about a fortnight after the accident, and then he persisted in calling me John Kirwan; yet he answered all my questions correctly.

I did not believe Mr. Gage's statement at that time, but thought he was deceived; I asked him where the bar entered, and he pointed to the wound on his cheek, which I had not before discovered; this was a slit running from the angle of the jaw forward about one and a half inch; it was very much stretched laterally, and was discolored by powder and iron rust, or at least appeared so. Mr. Gage persisted in saying that the bar went through his head: an Irishman standing by said, "Sure it was so, sir, for the bar is lying in the road below, all blood and brains." The man also said he would have brought it up with him, but he thought there would be an inquest, and it would not do.

About this time, Mr. G. got up and vomited a large quantity of blood, together with some of his food; the effort of vomiting pressed out about half a teacupful of the brain, which fell upon the floor, together with the blood, which was forced out at the same time. The left eye appeared more dull and glassy than the right. Mr. G. said he could merely distinguish light with it.

And Dr. Harlow, of Cavendish, Vt., writes: He recognized me at once, and said he hoped he was not much hurt. He seemed to be perfectly conscious, but was getting exhausted from the hemorrhage, which was very profuse both externally and internally, the blood finding its way into the stomach, which rejected it as often as every fifteen or twenty minutes. Pulse 60, and regular.

His person and the bed on which he was laid were literally one gore of blood. Assisted by my friend, Dr. Williams, of Proctorsville, who was first called to the patient, we proceeded to dress the wounds. From their appearance, the fragments of bone being uplifted and the brain protruding, it was evident that the fracture was occasioned by some force acting from below upward. The scalp was shaven, the coagula removed, together with three small triangular pieces of the cranium, and in searching to ascertain if there were other foreign bodies there, I passed in the index finger its whole length, without the least resistance, in the direction of the wound in the cheek, which received the other finger in like manner. A portion of the anterior superior angle of each parietal bone, and a semicircular piece of the frontal bone, were fractured, leaving a circular opening of about three and a half inches in diameter. This examination, and the appearance of the iron which was found some rods distant, smeared with brain, together with the testimony of the workmen, and of the patient himself, who was still sufficiently conscious to say that "the iron struck his head and passed through," was considered at the time sufficiently conclusive to show not only the nature of the accident, but the manner in which it occurred.

—In regard to this wonderful case, the *British and Foreign Med.-Chir. Review* declares it must be received into the archives of medical science for what it professes to be, and is, therefore, one of the most extraordinary cases on record.

Does a blow on the brain ever cause immediate death? American Journal Medical Sciences, 1853, vol. xxv.

Dr. Lente, in a communication on the Statistics of Fracture of the Cranium at the New York Hospital (*New York Journal of Medicine*), after analyzing 117 cases of which 21 recovered and 96 died, remarks: "In no case did death follow the receipt of the injury, until after the lapse of some hours, even in the most desperate cases; nor does it appear to be possible for an ordinary blow on the head, producing fracture of the skull, to cause immediate death. In a recent criminal trial of great interest, it will be recollected that at one stage of the proceedings it was much discussed whether a blow upon the head with an ordinary weapon capable of inflicting death could produce this result instantaneously. Many eminent surgeons were examined, and the general impression was that the thing was exceedingly improbable, if not impossible, and the question was thus decided."

Professor F. H. Hamilton, of Buffalo, in his table of Fractures of the Cranium, the cases amounting to 33, of which 21 recovered and 12 died, according to the reporter, arrives at a similar result.

SECTION IV.

INJURY OF THE BRAIN FOLLOWED BY A CHANGE IN THE GENITAL ORGANS, ETC.

Can we determine whether a man has been hanged before or after death by the influence of the brain over the genitals? Lancet, 1838, vol. xxxv.

By what signs are we enabled to determine whether a man has been hanged before or after death? This is an important question in medical jurisprudence which has not yet received a decisive answer. Had such been the case, the death of the Prince de Condé would not have been involved in an obscurity which can never be dissipated. M. Devergie has lately determined one or two circumstances likely to throw some light on the question. When a man has been hanged during his life, a quantity of semen is always found either about the orifice or in the cavity of the urethra. Another sign, more positive

still, is the congested condition of the corpora cavernosa, which contain more or less extravasated blood in their cells. The above phenomena are never found in the bodies of men who have been hung up after the extinction of life from other causes.

—We have just examined five men hanged, and in every one of them, detected with the microscope, a large number of spermatozoa in the fluid derived from the urethra.

During the recent excitement on the subject of a servile insurrection in Tennessee, we had the opportunity of examining *eight* persons hanged. In seven, *spermatozoa* were plainly exhibited by the microscope, and in the eighth case, the non-detection was due, we think, to a defect either in the instrument or lack of skill in the operator. The fluid in the urethra was simply presented on the object glass, and in the instance where no spermatozoa were seen, most blood corpuscles were apparent in the field of observation.

CASE I. *Wound of the left posterior lobe of the brain.* Lancet, 1831, vol. xx.

The following is an extremely instructive case: During the Russian campaign, a young grenadier received a wound from a lance on the posterior part of the head, towards the centre of the lambdoidal suture. The weapon was so well tempered that it penetrated far into the left posterior lobe of the brain, without producing any serious injury to the bone. The wounded man was left for dead upon the field, but being afterwards carried to a neighboring village, his wound was dressed and ultimately healed, leaving, however, the patient deprived of most of his senses, with seriously impaired functions of many of his internal viscera. The voice, after having been at first hoarse and obscure, was gradually lost; hearing, taste, and smell, were weakened, and the muscles of the larynx being partly paralyzed, this organ sank down for half an inch below its natural position, in consequence of which the glottis was constricted, and the epiglottis curved down upon the rima by the irregular action of the muscles by which this cartilage is moved. In order to respire, the patient was compelled to clasp his jaws firmly together, so as to raise the larynx by a simultaneous contraction of the attollent muscles of the pharynx and lower jaw, just as frogs do when swallowing air to fill their lungs. The diaphragm, participating in this paralysis, could no longer act upon the lungs; the pharynx, œsophagus, and stomach, had equally suffered. The abdomen did not alternate in its movements with the expansion and collapse of the chest, and the slightest exercise covered the body with perspiration, and rendered the face livid. His pulse was almost imperceptible, the motion of his heart could with difficulty be recognized, and his extremities were habitually cold. The intellectual functions, on the other hand, were quite untouched, and though unable to reply by speech to the questions he was asked, he wrote his answers with great precision and accuracy. "All these facts," argues Baron Larrey,* are in my opinion strongly corroborative of Dr. Gall's view, that the reasoning faculties reside in the periphery of the superior and anterior portions of the brain."

CASE II. *Tumors in the Cerebellum; effects on the genital organs.* Lancet, 1837, vol. xxxii.

I. F., aged five years, was brought to me on the 26th of Nov., 1835. He complained of pain in various parts of the abdomen, particularly on the right side, and also in the loins, stridor dentium, picking of the nose. He awoke

* Clinique Chirurgicale. Baillière, 1830.

suddenly, crying, and said his bowels were in pain; most restless in the early part of the night; wriggled his body while asleep; very hot in the night; pulse rapid; tongue white, with red points; feces dark, but not mixed with slime; bowels regular; appetite as good as ever. In the daytime he played with the children as if nothing was the matter. Treated for worms, with strong purges of calomel and jalap; but the symptoms continuing the same, two drachms of the spirits of turpentine were given twice a day. The nocturnal attacks continued, and he gradually lost flesh until April, when he was removed for change of air. He remained away until early in July. The latter part of April he hopped about as though his right leg had been sprained; this continued two or three days; returned after the lapse of a week, then disappeared, and returned again; but he did not continue liable to it more than a month; appetite was unimpaired, and not in excess from first to last; never complained of his head until three weeks before his death; but for several months it was observed he always kept his head erect when he stooped. During the last four months he generally cried when he passed his urine, and the penis was very frequently erected. His mother said she never saw such a state of the genitals in any other child.

July 7th. I saw him on his return home; very much emaciated; countenance rather anxious; head carried sideways in walking; looked obliquely at any object; could not see in a straight line; perfect motion and sensation in every part; during sleep, twitchings of the mouth, nose, and hands; awoke, as before, in a fright, and crying; complained very much of pain in the lumbar region; head hot; bowels regular; feces almost natural; urine, lateritious sediment; abdomen considerably enlarged; fluctuation of fluid very distinct; false ribs on both sides bulged out very considerably; felt the liver large; appetite very good; never sick; walks about and enjoys playing with other children; the fluid in the abdomen was carried off by the kidney; strabismus gradually appeared, and at length amaurosis; twitches of the face during sleep; then incessant motion of the arms, more especially of the right one; constant priapism; retraction of the testicles; redness of the meatus urinarius; intellect not in the least impaired; knew his parents until within a few hours of his death; nothing like paralysis of motion or sensation in any part of the body. From the 27th to the 31st of July he gnashed his teeth, bit his hands and arms, and the bedclothes, and beat his chest and head with his right hand most violently; his legs were motionless, but he moved them on tickling the soles of his feet. He died on the 12th of August, his death being preceded by two or three violent convulsions.

Autopsy. Head.—Pia mater very vascular; no effusion on the surface of the cerebrum, and no red points in its substance. About three ounces of serum in the ventricles; corpora quadrigemina, thalami, and corpora striata, firm; considerable effusion of lymph on the commissure of the optic nerves and pons Varolii.

Cerebellum.—A tumor of about the size of a marble in each lobe, apparently in the cineritious substance; the neighborhood of the tumors vascular, and very much softened, but more so on the right than on the left side. In the occipital bone, in the fossa for the right lobe of the cerebellum, there was a tumor also, the size of a marble, which occasioned a depression on the surface, and softening of that lobe. Each of these tumors, on being divided, contained the cheesy matter of scrofula.

Thorax.—A scrofulous tumor, the size of a large walnut, under the thymus gland; tubercles in the lungs; adhesions of the entire surface of the right pleura. *Abdomen.*—Various adhesions of the intestines; adhesion of the entire surface of the liver, which was enlarged; omentum congested, so as to

appear in a state of incipient gangrene ; mesenteric glands full of scrofulous matter, and very large.

CASES III., IV., V. *Three cases of injury of the cerebellum and occipital region followed by atrophy of the testicles.* Baron Larrey's Memoirs, translated by Dr. Rivinus.

One of the most curious cases of inflammation of the cerebellum, is that of a soldier of the army of Egypt, eighteen years old, who, at the moment when the vessel, in entering the harbor of Alexandria, fired a salute, was struck by a splinter of wood on the neck, from which resulted a violent contusion, with ecchymosis of the whole occipital region. He was carried to the ambulance in that city, where he remained seventy-five days. This man instantly displayed the symptoms of intense inflammation everywhere beneath the parts affected, but above all, in the cerebellum. The pain in the occiput, which was excessive, did not abate till an abscess at the neck opened spontaneously. The patient, whose life had been in danger, told us that, during the treatment of his disease, and long after his recovery, he could not move the head, and that he felt an extreme tenderness throughout the whole cervical region, so as to unfit him to bear the slightest touch upon it. The inflammation yielded, however, to repeated bleedings, to ablutions of the head with cold water, and to cooling and diluent drinks ; he finally recovered, and three months after the occurrence of the accident, he rejoined his half-brigade at Cairo, in which he continued to serve till his return to France with the remainder of our expedition. Several years having elapsed, when this soldier came before the Board of Health of the hospital of Gros Caillou in order to solicit his discharge, we mistook him, at first, for a young conscript, who had been exhausted by some asthenic disease ; he was then thirty-two years old, of middle size, thin and emaciated ; he looked pale and somewhat wrinkled, his eyes were depressed, the lips blanched, his hair scanty and bristled, particularly that covering the occipital region, where he continually felt a sensation of pain and habitual coldness ; yet his mental faculties had never sustained the slightest alteration. He was beardless, and his voice was shrill and feminine. Some of the assistants, at first, suspected a woman to have served in the dress of a soldier, of which there are so many examples on record. By a more minute examination, we were enabled to verify his sex, and to our great surprise, we found his genital organs reduced to the size of those of an infant some months old, his penis measured five or six lines at most by two or three in diameter, and never experienced the least erection ; his testicles were almost gone, and wasted to such a degree, as scarcely to equal in size a small kidney-bean.

This individual, who at the time of his discharge, in 1810, was introduced to Dr. Gall, declared that ever since he had met with this accident, he had lost every kind of sexual desire and erection, and that his beard, which previously had been thick, had disappeared by degrees. He, like all young fellows of his age, had also previously enjoyed the powers of virility.

Another not less curious instance was furnished us, in the person of the *Sieur François Auguste*, quartermaster to the horse artillery of the ex-guards, who, during the action of Benevent in Spain, in 1809, had been struck by the ball of a blunderbuss, which crossed from one side to the other the extensor muscles of the head, by grazing the occipital protuberances, which, being remarkably prominent in this subject, were thereby deprived of their aponeurotic adhesions. The two openings made by the ball were dilated, which enabled us to pull out part of his shirt collar which had remained behind

in the track of the projectile. The dressing of these wounds was made as the nature of the circumstances required.

The patient immediately felt a violent pain in his occiput, and a sense of weight of the whole head, together with numbness of the lower extremities. His vision and hearing were so much impaired that he could hardly discern any large objects or understand the most piercing sounds. His testicles became reduced, and wasted away; his penis diminished in the same proportion and remained motionless. The local symptoms were dispersed, and the patient was restored to health before the expiration of the fiftieth day.

The subject of the third observation was a man of the name of René Bigot, a chasseur of the horseguards, of a robust constitution and passionately fond of women. In the same action of Benevent he had received a sabre wound which had divided the whole projecting or convex part of the occipital bone as far as the dura mater, a small portion of which had been cut into. The right lobe of the cerebellum could be seen through the opening into this membrane. The slightest touch of this organ gave rise to vertigo, syncope and convulsions, without the patient evincing the least sign of pain. Before dressing the wound, we took the precaution to make an incision at the base of the flap in order to facilitate the discharge of the fluids. That part of it which corresponded with the opening into the meningeal covering, formed no adhesion, because of the incessant oozing from the internal surface of that serous membrane; otherwise there was no further effusion. These fluids escaped at every dressing in small bubbles, and produced a faint whizzing noise, which we attributed to the external air passing in and out through the same opening. After the first few days the patient lost the faculty of vision and hearing of the right (or affected) side; at the same time he suffered violent pain along the course of the spine, and a kind of formication in the testicles, the size of which most rapidly decreased; for, in less than a fortnight, the right testicle in particular was reduced to the size of a small Windsor bean, and he soon lost even the thoughts and recollection of the pleasures which he had enjoyed with so many women. The journey from Benevent to Valladolid he had borne very well. His wound was in every other way in the best possible condition, and with the exception of the functions of vision, hearing and generation, which appeared to be lost forever, we entertained some hope of his recovery. However, a new train of inflammatory symptoms became established, and went on increasing progressively, notwithstanding the antiphlogistic measures which we employed to overcome them. The pain in the head and spine caused the patient to utter the most doleful screams; he was continually drawn up in his bed, lying on the same side with the wound; the slightest movement caused him to have convulsions, and whenever he raised himself up for the performance of his alvine functions, he would fall into frightful syncope. As a last resort, I ordered the application of a large blister between the shoulders, and prescribed cooling and mucilaginous drinks; but he grew worse from day to day; he was, finally, attacked with opisthotonos, and expired February 9th, 1809, on the thirty-ninth day after he had met with this accident.

CASE VI. *Virility destroyed by a wound of the occiput.* Hennen's Surgery.

Gaetano, a soldier of the 9th Portuguese Caçadores, was struck by a piece of shell at Salamanca, in June 1813. It shattered the superior part of the occipital bone from within half an inch of the great knob on the left side, to the lambdoid suture. An irregular angular portion of the left parietal bone, nearly an inch in length and about an inch in breadth, was also fractured and beaten inwards. He labored under most alarming symptoms, total insensi-

bility, involuntary discharge of feces, laborious breathing, irritability of pupil, and weak low pulse, with occasional convulsive twitchings. The removal of the depressed portions of bone, and about an ounce of coagulum from the surface of the dura mater, on the second day after the wound, was attended with a diminution of most of the symptoms; and, with two copious bleedings (which were employed to arrest approaching inflammation), his recovery was perfected by the November following; except that, even then, the catheter was occasionally necessary to draw off his urine, the bladder not having recovered from a paralysis, which, for the first three weeks, was so complete as to prevent any evacuation without the use of an instrument. Of this, however, he ultimately recovered. This man was subsequently attached to the mule with my medical stores, and repeatedly consulted me on the means of recovering his virility, which, he said, the shell had *completely carried away with it.*

SECTION V.

AFFECTIONS OF THE BRAIN.

CASE I. *Immense tumor projecting the forehead and eyes.* By C. D. Gloninger, M. D., of Lebanon, Pennsylvania. New York Journ. Medicine, 1851.

Philip Umberger, of Lebanon Co., Pa., aged seventeen years, of a good constitution, came to Dr. Jno. W. Gloninger in the autumn of 1848, afflicted with almost complete amaurosis of both eyes, for which no exciting cause could be assigned. He did not complain of pain; and here it may be remarked, that this symptom, usually accompanying amaurosis caused by morbid formations in the brain, was absent during the whole period of the disease. As the disease advanced, vision gradually became extinguished, the ball of the eye commenced to protrude, and soon assumed a prominence which left no doubt of the existence of a tumor pressing the globes from their sockets. These symptoms continued with increasing exacerbation until death closed the scene. The mental faculties remained unimpaired; the senses of taste, smell, and hearing, were at all times in a normal condition. The constitution did not in any way sympathize with the local disease. To the time of dissolution he was not confined to bed, but continued to sit up, and take exercise in the open air. He slept well, evinced great patience, and although aware of his hopeless condition, was cheerful and indulged in lively conversation. It is to be regretted that the history of this interesting and melancholy case could not be enlightened by an autopsy. He expired in November last, suddenly, and without a struggle. As soon as intelligence of his death had reached us, in company with several physicians we started with the intention of making a post-mortem examination; but as no arguments could induce the parents to permit it, we were obliged to content ourselves with an external examination of the head.

The following are the measurements, and notes, taken at the time referred to:—

Greatest breadth of forehead, ten and a half inches.

Greatest circumference of the head over the forehead, twenty-seven and a half inches.

Distance between inner canthi, seven inches.

From top of forehead to chin, ten inches.

Occipito-mental diameter, twenty-nine and a fourth inches.

Prominence of nose entirely disappeared; nasal bones widely separated; frontal bone absorbed, with the exception of a faint outline of the orbitary

ridges; superior maxillary bone pushed outwards, and much absorbed; palate bone pressed down, which had greatly impeded speech.

A few months before the fatal termination, a secretion of a puriform character was discharged from the foramen incisivum, and this became more offensive and copious as the malady progressed.

CASE II. *Successful excision of an ounce and a half of the brain for cancer.* By the late Prof. Sanson, of Paris. Ranking's Abstract, 1847.

In the year 1839, Mr. B. came to Paris, for the purpose of undergoing an operation for a cancerous tumor of the orbit; the growth had acquired the size of the head of a fœtus. Pains in the limbs, and some degree of previous paralysis, showing that the brain was in all probability implicated, induced Professor Sanson at first to set aside all idea of an operation. But, the patient having expressed a settled purpose to destroy himself unless the operation was proceeded with without delay, Mr. Sanson consented to operate in the presence of several British practitioners, fellow-countrymen of the patient.—A portion of the frontal, nasal, and maxillary bones having been removed, the dura matter was found to be affected, and was likewise excised, but the cerebral substance itself was occupied by the disease; and after a short operation, in which Mr. Sanson alone insisted that it was his duty to achieve the operation he had begun, *one ounce and a half of the cerebral substance* was removed by an operation which penetrated into the *lateral ventricle*. The cerebral vessels were cauterized with a heated probe, and the patient recovered completely from the effects of this tremendous operation—no paralysis, no disturbance of the cerebral functions having been observed. Sixteen months after, the patient died in consequence of reproduction of the growth in the scar, and on dissection the disease was found to extend as far as the posterior cerebral lobe.

CASE III. *Hernia of the brain from caries.* By Dr. Pierquin. Journal de Progrès. Lancet, 1830, vol. xviii.

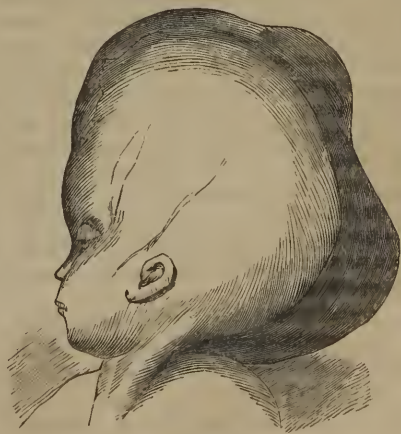
Rose —, aged 26 years, of a lymphatic temperament, feeble constitution, small stature, with blue eyes and light hair, was a servant in Romans, in the department of Drôme. When France was invaded by the enemy, the little town of Romans suffered greatly from the brutality of the soldiery. Some women were violated, among whom was the subject of this case. A short time after the attempt upon her person, Rose observed a white discharge, the existence of which she was afraid to communicate to any one. Her health grew worse daily, until at length she became a prey to constitutional syphilis. After having suffered the most excruciating deep-seated and cephalalgic pains, she entered the hospital, at which time she had a venereal caries about the middle portion of the cranium. All the remedies usually employed in similar cases proved ineffectual. The caries increased daily, and the sanies discharged from it was so fetid, that the patient suffered almost as much from it as from the disease. All the senses were unimpaired except that of smelling, and it could not be ascertained whether this resulted from the progress made by the disease or from the odor of the discharge. It was in this desperate situation she was sent to the General Hospital at Montpellier, which she entered in 1821. The case, considered as the consequence of caries from a neglected venereal affection, offered in itself nothing highly interesting, but it was different when viewed in relation to its bearing upon the physiology of ideology. We at first endeavored to ascertain the influence of the external air upon the circulation. During the evening we counted 120 pulsations, and from 98 to 100 during sleep. This number was varied by the agreeable or disagreeable nature of the dreams,

as was ascertained upon the patient's waking : under the two last circumstances, the protrusion of the cerebral pulp became stronger, whilst it did not exist at all in undisturbed sleep. The first of these phenomena took place equally whilst awake, just as if, in the generation or conception of ideas, the brain was struck with a state of orgasm, approaching a genuine erection. During quiet sleep the cerebral subsidence was such, that the organ seemed to repose upon itself, at which time the encephalic pulp withdrew entirely from the lips of the wound. Often at the dressing hour the patient was not yet awake, and it became necessary to rouse her from ordinary long and sound sleep ; the difficulty attending the passage from this cerebral inertia to activity, was marked by such a state of orgasm, that it became necessary at each dressing to take off a considerable portion of the pulp of the brain ; an operation always unattended with pain, and unperceived by the patient, who seemed to suffer from it neither moral nor physical inconvenience. So many observations were doubtless sufficient to prove that the brain is the ideologic centre. But in addition to these, we very often subjected the patient to another conclusive experiment. Whilst placed on her seat during the dressing, we entered into conversation upon some topic that might fix her attention. The moment she became engaged, the oscillatory movements of the brain became at once more rapid and stronger : pressure was now applied upon the brain as strongly as possible, and in an instant the patient lost the use of all her senses, could no longer form an idea, ceased to speak, terminating the conversation suddenly in the middle of a word, which she finished when we removed the compression. The same phenomena took place with regard to conversation commenced, the patient completing the phrase when we ceased to press upon the ideologic organ. These different experiments were not only unattended with the slightest pain, but were unknown to the patient, who never perceived the interruption to her intellectual existence, which we occasioned at pleasure.

From this curious case, we may conclude that the brain is the central organ of the sensations, and that without it there would be neither attention, perception, nor memory.

CASE IV. *Chronic hydrocephalus in an infant measuring thirty inches around the head.* By George C. Blackman, M. D., Prof. of Surgery in the Med. College of Ohio, Cincinnati. New York Journal Med., 1854.

About the first of May, 1850, a child of Mr. P., of Newburg, was placed under our care, for the treatment of chronic hydrocephalus. This child was six months of age ; its body and extremities were well formed, but the appearance of its head is well represented in the figure. The circumference of the head was about thirty inches, and, when held between the eye and the light, it was perfectly transparent. The integuments were highly vascular at various points ; and at its anterior and posterior portions there were bag-like protuberances, appearing as if about to burst from the pressure



of the enormous quantity of fluid within. The health of the child was good, nutrition well performed, and, with the exception of the threatened rupture of the cranial coverings, there were no indications of immediate danger to life. The head began to enlarge very soon after birth, and continued to increase, until, when about four months old, during the night, the cranial cavity became suddenly nearly empty, whilst the integuments covering the entire body were distended as in anasarca. In the course of a few days, the latter completely disappeared, and the head regained its accustomed extraordinary size. In this condition we first saw it, and, as it would have been but folly to have held out an idea of cure, we proposed, by puncture, gradually to diminish the distension of the scalp, and to save the parents from the shock of witnessing the sudden death of their child, by the spontaneous opening which seemed not far distant. With a narrow bistoury an opening was made through the thin and distended coverings of the cranium, and about six or eight ounces of fluid were allowed to escape before the puncture was closed with collodion. The first tapping was done on the 6th of May, and, as no unpleasant immediate effects followed, another opening was made some two or three days afterwards, and, in the course of ten days, about two quarts had been evacuated. On the 18th of May, after a few hours of suffering, with symptoms of restlessness, vomiting, &c., the child died. After death, the scalp was freely laid open, and the fluid emptied from the cranial cavity, filling an ordinary-sized wash-bowl. There were no traces of cerebral substance to be found, but at the base of the brain the pons Varolii and medulla oblongata existed of their natural size and shape.

Shortly after the period above mentioned, I drew up a more detailed account of this case, which was presented to the Orange County Medical Society, but, having lost this report, we have been compelled to furnish the above history from memory.

CASE V. *Singular case of chronic hydrocephalus.* Lancet, 1852.

On the 7th ult., James Scott, of Elgin, died, aged 41. He was 3 ft. 11 in. high. His limbs were of childlike proportions, but his head, which was twice the size of that of a full grown man, was $11\frac{1}{2}$ inches long, $27\frac{1}{2}$ inches round the brow, 15 inches round the back, and from the nape of the neck to the nose, 20 inches. From under the nose to the extremity of the chin was $4\frac{3}{4}$ inches. Until one year old he had the appearance of other children, when at that age his head began to grow rapidly. He was never able to walk, and had to be tied in his chair. He could not help himself to food, and never indicated that he wanted any. His eye, which was very small and piercing, rolled incessantly. For a long period he had been subject to fits every night, and for 30 years was bedridden. He gave no indication of understanding, and was sometimes speechless for two or three days. He seemed to have suffered great pain, for in the midst of his prayers he would break into paroxysms of rage, curse and swear without any object. When his mother's corpse lay in bed beside him, he took no notice of it. He had a luxuriant head of hair and strong beard. His parents had been well off in the town, but upon their death the deceased was taken care of by the parochial authorities till his death.

CASE VI. *Account of an immense head from hydrocephalus.* By Paul F. Eve, M. D. Nashville Journal Med. and Surg., 1854, vol. vii.

During a recent visit to a professional brother in East Tennessee, it was my good fortune to secure for the Museum of our University, the cranium of a child of most extraordinary dimensions. In all my observations I have never

seen or heard of so large a human head. Of sixty-nine cases of hydrocephalus collected by Dr. Charles West, of London, in 1842, and Dr. J. C. Blackman, of New York, 1854, the greatest measurements of the head over the integuments, hair, &c., were $27\frac{1}{2}$ inches in circumference, and $19\frac{1}{2}$ inches over the vertex from ear to ear. In one of Dr. Blackman's cases, the circumference was about thirty inches, but then the serum had escaped out of the cranium and had formed bag-like protuberances under the scalp. In the instance exhibited in London by the late Mr. Liston, 100 *ossa Wormiana* were counted: in the one whose brief record is to be presented, there are more than 400 of these accessory bones, over 270 of which are in the course of the lambdoidal suture alone. In circumference the cranium measures $34\frac{1}{2}$ inches, and $20\frac{1}{2}$ inches over the vertex from ear to ear.

History.—The child was born of parents in limited circumstances, in the State of Tenn.; labored all its life under hydrocephalus, and died at about fifteen years of age. I regret not being able to be more precise as to dates, &c., for which there are two reasons; the head was surreptitiously obtained, and my applications soliciting further information have remained for months unanswered. The enlargement of the head was particularly noticed when he was four months old, and continued to increase until ossification of the fontanelles and the numerous *ossa Wormiana* took place, when convulsions supervened and destroyed life. It was early observed that the sutures were widely distended, and osseous points could be felt in them, the nuclei of future accessory bones. As soon as these coalesced so as to arrest mechanically the intrinsic expansion of the encephalon and its membranes, death was the result.

The physical development of the boy with the exception of the head, was quite limited. He is represented as having been no larger than a child seven or eight years old. He was never able to raise his head without the assistance of his hands; he consequently never walked, and his locomotion was by rolling over the surface. When arrived at the door of a house, he would manage with his hands to get his head upon the sill, and would then roll in upon the floor.

His intellectual faculties were not deficient; but on the contrary, he was considered sprightly, much more so than other members of his family. He was fond of putting perplexing questions to strangers, and seemed to delight in playful mischievousness. The exact date of his death has not been ascertained; one letter states he died at fourteen, and another at sixteen years of age.

We present now the exact dimensions of the cranium:—

1st. *External Surface.*

Perpendicular circumference	2 feet $10\frac{1}{4}$ inches.
Horizontal "	2 feet $9\frac{1}{2}$ "
Antero-posterior diameter	$10\frac{1}{2}$ "
Vertical "	10 "
From ear to ear over vertex	$29\frac{1}{2}$ "
Length of right parietal bone from anterior inferior to posterior superior angle	$11\frac{1}{2}$ "
Length of left parietal bone, from same points	$10\frac{1}{2}$ "
Width of these bones from	$8\frac{3}{4}$ to $9\frac{3}{4}$ "
Length of coronal suture from anterior inferior angle of one parietal bone to the other	20 "

The length of the other sutures cannot well be measured, owing to the numerous Wormian bones.

Number of <i>ossa Wormiana</i> , counted over	400
" in the lambdoidal suture alone "	270

Largest of these bones measured $2\frac{1}{2}$ inches by $1\frac{1}{2}$.

Width across lambdoidal suture occupied by these bones	3 inches.
“ sagittal	3½ “
“ squamous	2½ “
“ coronal	2½ “

The thickness of the cranium is very variable. By maceration several of the *ossa Wormiana* became loose and fell out.

2d. *Some of the Internal Dimensions.*

Length of crista galli	10½ lines.
Projection of ridge under the sagittal suture for attachment of longitudinal sinus	1 inch and 1 line.
Length of apophyses of Ingrassias	3 inches & 4 lines.
“ from tip of one to the other of these wings	6 “
Distance between clinoid processes	1½ “
Space for pituitary gland or sella turcica	¾ “
Length of petrous portion of temporal bone	3 “

The internal surface of the cranium is quite smooth, having only been marked with bloodvessels and the attachments of the dura mater. The post-mortem, made forty hours after death, exhibited the membranes well developed and quite vascular. The brain was semi-putrid, and occupied the lower portions of the cranium. The quantity of water was of course very great, but could not be measured.

CASE VII. *Aneurism in the head cured by ligature to the carotid.* By Prof. Benj. W. Dudley, M. D., of Lexington, Kentucky. Transactions of the Amer. Med. Association, vol. iii.

Of all the cases of aneurism on record, probably one from St. Louis, about six years since, is the most remarkable, when to the peculiarity of location is added the success of the treatment. The patient, a laborious mechanic, 25 years of age, had been an occasional and intense sufferer in his head for five or six years, for which much had been done in the way of local applications and internal remedies. Upon examination, the right eye was found to be remarkably protruded from the socket, with pulsations which could not fail to arrest the notice of the observing surgeon at some distance from the patient. The transverse suture at the outer corner of the eye was opened sufficiently to admit the end of the finger. A large portion of the os frontis, os temporis, and temporal plate of sphenoid bone, and a part of the parietal bone, were disjoined and elevated some lines above the proper level by an aneurismal affection of the internal carotid. The eye and ear of that side ceased to perform their functions. Reposing much confidence in the efficacy of preparatory medicine with appropriate food, the patient was put upon the tri-weekly use of evacuants, selected with a view to the profuse, yet healthy action of all the secretory processes, while his diet was required to be light, of easy digestion, unexciting, fluid, and in most moderate quantities. After a few weeks passed in this preparatory course, with great amelioration of suffering, he was taken before the class, since an operation was deemed necessary, however remote the prospect of triumph. When the carotid artery was exposed, it was held for a short space of time between the thumb and finger, in order to witness the effects of checking the circulation on the brain and nervous system. Immediate quiet in the corresponding side of the head, with cessation of pulse, ensued, and then without further delay the artery was tied.

When the dressings were applied, the patient expressed himself as being relieved of a noise in his head, which had been an attendant throughout the history of the malady.

The great disturbance of the circulation of the brain, consequent to the application of the ligature, was attended four days after by a highly morbid state of the biliary secretions, accompanied with fever, which soon yielded to broken doses of tartar emetic and cathartics of calomel.

By the expiration of the second week from the operation, the tumor had receded so far that the disunited portions of the cranial bones had recovered their proper position, while the eye and ear were restored to their functions. Before the conclusion of the month, he left this place for St. Louis, where he resumed and now is engaged in prosecuting his occupation as a blacksmith.

In this remarkable case, the inference is very fair that the operation was rendered successful by the preparatory and consecutive treatment; while all that medical skill could claim would have availed but little without the assistance of the ligature, is an inference not less rational.

CASE VIII. *Aneurism of the carotid artery within the cranium cured by ligature to the left common carotid.* By R. W. Coe, F. R. C. S. E. Dublin Med. Press, 1855.

In the middle of November, 1851, I was requested by my friend Dr. Swayne to see a woman (Hannah Wray) with him, whom he supposed to be suffering from aneurism of one of the arteries of the head. She gave me the following history: She was 55 years old, married, and had been in good health up to five months previous to the time of my seeing her, when she had had a very angry altercation with her husband; blows passed between them, she receiving some on her head; during the quarrel she worked herself into a most violent passion, and at the same time greatly exerted herself by lifting some very heavy weights. Within five minutes after these occurrences—in fact, as soon as she recovered a little from the excitement, she complained to a neighbor of an extraordinary sensation (*a buzzing and beating noise*) in the head, such as she had never before experienced, and which noise, she now tells me, has continued without a moment's cessation from that time to this (from June to November, 1851). She likens the buzzing, as she calls it, in her head to the puffing of a steam-engine, "whish, whish, whish," and says that she hears it more distinctly with the left than the right ear, and that it is accompanied by a continuous sound like low thunder, emanating apparently from, and heard most distinctly at a spot situated near the posterior superior angle of the right parietal bone. Since these symptoms came on, she has been unable to lie down in bed, and has been obliged to sleep in the sitting posture; and though always in the habit of dreaming, yet the dreams now are become of the most frightful character, disturbing her rest, and causing her to wake in an agony of terror.

On examination, no abnormal sound could be heard in the heart or great vessels; but on reaching the region of the neck, a very loud *aneurismal bruit*, synchronous with the pulse, was at once perceptible; it could be traced to the head, and heard distinctly over its whole surface, but most loudly over the left petrous bone; pressure on the right common carotid had not any influence over the sound, but when exercised on the left, caused it to cease immediately; though, after a time, she herself can hear a faint murmur, even whilst the pressure is continued, and that to the perfect prevention of the passage of blood through the artery. On listening very attentively with the stethoscope over the right carotid, the beat of that vessel could be distinctly separated from the bruit, which was also less loud on this than on the left side. There was a very trifling difference between the appearance of the two eyes, which I found to depend on a very slight squint inwards of the left eye, and a habit she had of winking with it. This peculiarity in the eyes came

on subsequent to the buzzing in the head. She said she did not see so well with the left as the right eye; but the difference, if any, was very slight; she, however, always used the right eye for ordinary vision. On making her look at an object with both eyes, she saw two images, one by the side of the other; but they were not equally distinct: on closing the left eye, the less distinct image vanished. She herself was not aware of the slight strabismus, merely imagining that the left eye was rather the weaker of the two, and believing that she either winked or placed her hand before it simply for the purpose of guarding and saving it. She could, when she willed, abduct the left eye nearly as well as the right.

Her hearing was not affected; but the noise in the head was so great as to overcome even the sound of the rolling of the carriages in the street, unless attention was strongly directed to them. No tumor could be detected after a careful examination both of the external parts of the head and neck, as also of the nasal, buccal, and pharyngeal cavities.

My diagnosis was aneurism of the left internal carotid, as it enters the cavernous sinus, immediately after its emergence from the petrous portion of the temporal bone. I remarked, that I should consider the diagnosis perfectly verified in ease of recovery, if the following phenomena should occur after ligature of the left common carotid; first, of course, if the bruit ceased; then, and more especially, if the strabismus in the left eye should quickly almost suddenly increase, until it showed that the paralysis of the external rectus muscle was nearly entire; and if, eventually, it were followed by slow but gradual recovery of the power of the muscle, as the patient regained her usual health; in other words, if the strabismus should eventually be recovered from.

December 11. The patient being under the influence of chloroform, I tied the left common carotid artery. On ligaturing the vessel, the rush at once ceased; but in a very short period it was succeeded by a very soft, almost continuous murmur, perceptible by applying the stethoscope immediately over the left ear. After the operation, she was able to retain the horizontal posture. At four P. M. of the same day, could hear no murmur myself; the patient says she hears a crackling in her head, and a noise like a bell. 13th. Hears no noise in head, even when she listens attentively; nor can any be heard on applying the stethoscope to the temples. She cannot turn the left eye out as much as before. Ten P. M. She drew my attention to the fullness of the anterior temporal arteries of the right side. 15th. Removed stitches from the wound, which is soundly healed, except where the ligature comes out. She dreamed a good deal last night—horrid dreams. Can now hear carriages in the street distinctly, even when they are far off. 18th. Slept well last night; no bad dreams, though she did dream, which she has always been accustomed to do. 19th. Dreams of a funny character, instead of frightful. 22d. Dreams still more ludicrous in their character. 29th. No improvement in squint. 30th. Does not dream so much.

January 6. Left eye seems to be moved more outward. 13th. Ligatures came away in the evening. It will be perceived that the ligature was a long time coming away—thirty-three days. Since the 5th, slight traction was used on it by means of an India-rubber band. I was indebted for this idea to some remarks made by Mr. Clarke at one of our meetings.

February 2. Continues improving, but complains of indistinctness of vision when using both eyes. Has regained the power of abducting the left eye to nearly its full extent. 16th. Indistinctness of vision still remains when using both eyes. Abduction of left eye nearly perfect. Patient may be considered well.

Remarks.—This case is, I imagine, unique as regards diagnosis; it is, as

far as I can ascertain, the only instance in which aneurism of the internal carotid artery within the cranium has been diagnosed during the life of the patient.

CHAPTER II.

SPINAL COLUMN.

SECTION I.

INJURY TO THE VERTEBRÆ.

CASE I. *Fracture of the spine treated successfully by extension.* By W. H. Crowfoot, Esq., of Beccles, Great Britain. Transactions of the Provincial Med. and Surg. Association for 1853.

A. C., æt. forty-two, whilst driving a carriage under an archway, was bent double by the back of his neck coming in contact with a beam. Complete paralysis both of sensation and motion of both legs; great deformity about the ninth to the twelfth dorsal vertebra, with posterior curvature; the spinous processes of the ninth and tenth vertebræ were divided from each other, the body of the ninth having been forced forward, whilst that of the tenth projected backwards; inability to empty the bladder. No doubt existed of displacement of the bones of the spine and pressure on the cord. A broad and well padded belt was passed round the chest and under the arms, and it was fixed from behind to a strong staple at the upper end of the frame of the bed: a similar belt was buckled round the body just above the pelvis with two strong straps attached to it, one before and the other behind, each having a strong iron ring at its extremity; these straps were brought between the thighs and made fast to the pulleys. Gradual but considerable extension was now made, which evidently diminished the curvature and restored a certain degree of sensibility to the legs. This excited a hope that if the bones could be retained in their amended position and means were taken to obviate inflammation, the cord might resume its functions. The patient was placed on his back on a firm bed, so that his feces could be removed without disturbance, and the most perfect rest enjoined. In the first ten days, from six to ten ounces of blood were daily taken away from each side of the spine alternately, with great relief to the patient's feelings, who was cautiously moved on his side by a sheet. The patient steadily improved; in three weeks he could move the right toe; in two months he could support himself with but little assistance, and in twelve months was able to resume his work as a coachman. There remains some deformity and an unusual separation between the ninth and tenth vertebræ, and horse exercise, or even walking, is apt to produce pain and numbness; otherwise he is in perfect health.

We give this case, although a single one, from its importance and rarity. The treatment is highly creditable to Mr. Crowfoot, and the whole paper (short though it be) indicative of a man of excellent sense and judgment.

CASE II. *Fracture of the processus dentatus: suddenly fatal five months afterwards.* By W. Parker, M. D., Prof. of Surgery in the College of Physicians and Surgeons, New York City. New York Journ. Med., 1853.

On the 12th of August, 1852, while driving a "fast horse" at the top of his speed on the plank road near Bushwick, L. I., he was thrown violently from his carriage by the wheel striking against the toll-gate. He alighted upon his head and face, about fifteen feet from the carriage. Upon rising to his feet he declared himself uninjured, but soon after complained of feeling faint: after drinking a glass of brandy, he felt better, got into his carriage with a friend, and drove home to Rivington Street, in this city, a distance of more than two miles. There was so little apparent danger in his case that no physician was called that night. Early on the morning of the following day, Dr. B. was called to visit him. He found his patient reclining in his chair, in a restless state, and learned that he had suffered considerable pain in the back part of his head and neck during the night. He was entirely incapacitated to rotate the head, which led to the suspicion of some injury to the articulations of the upper cervical vertebræ; but so great a degree of swelling existed about the neck, as to prevent an efficient examination. There was no paralysis of any portion of the body; his pulse was about 90, and his general system but little disturbed. Warm fomentations were applied to the neck, and a mild cathartic administered. On the following day there was no particular change in his symptoms, but as there existed considerable nervous irritability, tinct. hyoseyami was prescribed as an anodyne, and fomentations of hops applied locally. On the third day leeches were applied to the neck, and after this the swelling so much subsided, that on the fifth day an irregularity was discovered to exist in the region of the axis and atlas, which had many of the features of a partial luxation of these vertebræ.

At this time he began to walk about the room, having previously remained quiet on account of the pain he suffered on moving. He persisted in helping himself, and almost constantly supported his head with one hand applied to the occiput. He often remarked, if he could be relieved of the pain in his head and neck he should feel well. He began to relish his food, and the swelling nearly disappeared, at the end of a week, leaving a protuberance just below the base of the occiput, to the left of the central line of the spinal column, with a corresponding indentation. Notwithstanding strict orders to remain quietly at home, on the ninth day after the accident he rode out, and in a day or two after returned as actively as ever to his former occupation of distributing milk throughout the city to his old customers. During the following four months no material change took place in his symptoms, although he constantly complained of pain in his head. For this period he did not omit a single day his round of duties as a milkman, which occupied him constantly and actively from five o'clock in the morning till nearly noon. On the 1st of November Prof. Watts examined him, and inclined to the opinion that there was a luxation of the upper cervical vertebræ.

About the 1st of January, 1853, the pains, from which he had been almost constantly a sufferer, became more severe, and he was heard to complain that he could not live in his present condition: he remarked also that he had heard a snapping in his neck. After going his daily round on the 11th of January, he complained of feeling cold, and afterwards of a numbness in his limbs. In the evening he had a chill, and complained of pain in his bowels. He passed a restless night and arose on the following morning about six o'clock: he was obliged to have assistance in dressing himself, and experienced a numbness of his left, and afterwards of his right side. He attempted to walk, but could not without help, and it was observed that he dragged his feet. He sat down in a chair and almost instantly expired at eight o'clock A. M. on the 12th of January, precisely five months from the receipt of the injury.

The *autopsy* was made thirty hours after death, by Dr. C. E. Isaacs, in presence of several medical gentlemen.

Muscular development uncommonly fine; an unusual prominence observed in the region of the axis and atlas. On making an incision from the occiput along the spines of the cervical vertebræ, the parts were found to be very vascular. These vertebræ were removed *en masse*, and a careful examination instituted. The transverse, the odontoid (ligamenta moderatoria), as also all the ligaments of this region, excepting the occipito-axoideum, were in a state of perfect integrity; this latter was partially destroyed. A considerable amount of coagulated blood was found effused between the fractured surfaces, some of it apparently recent, but much of it was thought to have occurred at the time of the accident, and afterwards to have prevented the union of the bones. The spinal cord exhibited no appearances of any lesion. The odontoid process was found completely fractured off, and its lower extremity inclining backwards towards the cord. Death finally took place, doubtless, from the displacement of the process, during some unfortunate movement of the head, by which pressure was made upon the cord. The destruction of the occipito-axoid ligament, which would otherwise have protected the contents of the spinal cavity, must have favored this result.

CASE III. *Sudden death from turning the head while shaving, caused by previous fracture of the vertebra.* By Joseph Comstock, M. D., of Lebanon, Connecticut. Boston Med. and Surg. Journ., 1848.

The sudden death of a lad aged 14 years, who fell in attempting to get from a pew into the aisle of a meeting-house, near my residence, brought to mind the case which occurred to Mr. Abernethy, at St. Bartholomew's Hospital, some years past. This lad, who fell here, son of Mr. Tracy, struck on the angle of the socket of the left eye. The contusion was slight in external appearance: but death was instantaneous, he showing no sign of life after the fall, but one single gasp!

The case which occurred at St. Bartholomew's was related in the London Metropolitan, and never, that I know of, has appeared in any medical journal. The relater says: "A drunken coal-heaver fell from a wagon, going up Ludgate Hill. He was covered with mud, and appeared to be hurt. I and two others laid him upon a shutter, and took him to St. Bartholomew's Hospital. He was stripped, and the surgeon examined him, but no injury could be discovered; still he could not rise up in bed. Mr. Abernethy happened to come in shortly afterwards, when the case was shown to him, but he could make nothing of it. 'Let him,' said that great surgeon, 'be washed thoroughly clean, and send for a barber and have that beard taken off, which appears to be of a month's growth.' About an hour after this, as I was relating to the surgeon how he fell from the wagon, a message was brought that the man had instantaneously, while he was undergoing the operation of shaving, given up the ghost. We all immediately repaired to the spot, where lay the man, half shaven and quite dead. The barber said he appeared to be well, and was talking to him one instant, and the next was a dead man. 'I had hold of him,' said he, 'by the nose, and did but turn his head very gently to use the razor, when he, without breathing or a sigh, went off.'

"Abernethy turned to the young students, and told them this was a case for study, saying 'there was a cause for the man's death; and that the following morning he would open the body and find it out. But,' added he, 'think of the ease, and before I make the examination, tell me in the morning, each of you, your opinion, what it is that has so suddenly deprived him of his life.' One of the students said, 'I think a vertebral bone is fractured, and that as

the barber turned his head to shave him, a splinter penetrated the spinal cord.' 'You have it,' cried Abernethy; 'turn him over, and we will see.' They immediately cut down the back, and discovered a small piece of fractured bone, not bigger than half a pin, which had penetrated the spine; then taking the corpse by the nose, they observed, as they turned the head one way, the splinter come out, and as they turned it the contrary, it entered the spinal cord. The problem of his death was at once solved, and I learnt how little it took to stop the great machine of *life in man*."

Thus far the relation of this case, to which I may add, in conclusion, the following

Remarks.—The reason that Mr. Abernethy could make nothing of the case, when he first saw the man alive, after the accident, may have been that fractures of the cervical vertebræ may so disable a patient, that he, like the coal-heaver in this case, could not rise up in bed. The tact and talent of Mr. Abernethy's student, in pointing out the cause of the instant death of the man, when the barber turned his head, by taking hold of his nose to shave him, has ever, when I have thought of this case, struck me with admiration. The case appears not to have been related by a medical man; hence the vertebræ which was fractured is not designated. But we should at once infer that it could be no other than one of the cervical. And this was probably the cause of the instant death of the son of Mr. Tracy.

P. S.—There is a case related in which a negro man fractured the fourth and fifth cervical vertebræ, who lived thirty-three hours; but never secreted any urine after the accident. The catheter was frequently introduced, and not a drop drawn.

CASE IV. *Transverse fracture of the atlas; patient lived twelve months after it.* Sir Astley Cooper's Lectures in the Lancet, vol. i., 1826.

At the time I lived with Mr. Cline, the following case occurred: A girl received a severe blow on the neck, after which it was found, that whenever she attempted to look at anything above her head, she was under the necessity of putting her hands behind it and gradually elevating it to the object. When she wanted to look at anything beneath her head, she put her hands under her chin, and lowered her head to the object. If any other child in play ran against her and shook her body, the concussion produced uneasy sensations, and she would run to a table, or any place on which she could rest her head, and support it with her hands under her chin until the agitation produced by the shock had subsided. The child lived twelve months after the accident. On examining the body after death, Mr. Cline found the atlas broken through; there was a transverse fracture of the atlas, but no displacement. When she endeavored to raise her head, the dentiform process quitted its natural situation, and carried back a portion of the atlas; when her head inclined forward, pressure was produced upon the spinal marrow, as it was likewise when the body was agitated. This is a curious instance of fracture occurring in the cervical vertebræ without displacement. With respect to the treatment of fracture, with displacement of the spine, nothing has hitherto been effectually done in surgery.

CASE V. *Dislocation of the neck reduced.* Lancet, 1849.

Geo. L.—, æt. 46, able seaman, of a stout, muscular conformation, with a short, bull kind of a neck. On the evening of the 10th of Nov., 1847 (ship at sea), whilst descending the fore-ladder, he fell forwards, with his foot catching between the steps, and pitched on the right side of the head, without inflicting any wound on the scalp; when taken up, he was found to be quite

helpless, and on being brought into the sick-berth, the chief seat of pain was referred to the back of the neck, which, on examination, presented considerable irregularity of the spinous processes of the fifth and sixth cervical vertebræ, with a bulging of the muscles on the right side, corresponding to the position of the transverse processes of the above-named vertebræ. Prior to my arrival in attendance on the patient, a crepitus had been twice detected by the assistant-surgeon, at the seat of injury, and pressure caused severe pricking and lancinating pains to extend down both arms to the fingers' ends; these were felt most acutely on the left extremity. The slightest movement of the head caused great agony. The following were amongst the most prominent of the symptoms resulting from the accident: Numbness of superior extremities, with nearly total loss of their motive power; but not completely so, as he could raise the arms in a slight degree, when desired; the ability to grasp any object with the hands was, however, entirely lost, more particularly so in the right hand. Paralysis of the lower extremities; partial of the left leg, but complete of the right one, which remained, when the patient was seated, doubled under the chair, without his having the power to alter its position, though frequently requested to do so. Pulse slow and small. Pupils irregular; the right more contracted than the left, with less sensibility to the stimulus of light. Face turned towards the point of the shoulder, with the head bent forward on the chest; respiration natural; questions answered coherently.

Extension was made, by suspending the patient in the broad fold of a sheet, passed under the chin, and up by the sides of the head; the two ends being then secured together, and placed on a hook in a beam immediately over him, the chair on which he was seated was gradually removed, so that the loop of the sheet, with the chin resting in it, had the whole weight of his body, the legs remaining powerless from paralysis, trailing on the deck; the shoulders were now gently rotated, and pressure was made, at the same time, with my thumbs on the swelling in the right side of the neck, which by degrees receded. These measures could be only persevered in for a short time, but they soon removed the irregularity of the spinous processes, and the bulging of the vertebræ. He now quietly regained the use of the lower extremities, and expressed a desire to pass his urine; with assistance, he walked to the water-closet close at hand. The numbness of the upper extremities continued for some time longer, though not to the same extent as at first, and the power of grasping was very much improved.

I placed him in a cot, on his back, with the head in an easy position, where he remained for a period of about five weeks. Leeches were applied, twice or thrice, over the seat of injury, on the first few days succeeding the accident. By the end of six weeks he returned to his duties, with all his motive powers restored, excepting, perhaps, a slightly diminished ability to grasp strongly with the hands, and a numbness, or rather total want of sensation, at the tip of the forefinger; this insensible spot was not larger than a good-sized pin's head. I ought to have mentioned above, that, during the time he was suspended in the sheet, the assistant-surgeon, from whom I received valuable aid on the occasion, placed himself in front of the patient, to watch closely any unpleasant symptoms that might arise from the pressure under the chin.

During the time this man remained under my observation, on board the ship, subsequent to his return to duty, I noticed that he never carried his head perfectly straight, as he naturally did before the accident; but this was only to be detected by a very close and attentive observer. The man himself would not admit the defect.

He is now serving on board H. M. S. Hastings, in the East Indies.

CASE VI. *Dislocation of the last dorsal on the first lumbar vertebra.* This occurred in the practice of Schmucher, the Surgeon of Frederick the Great, and is referred to by Dr. Stephen Smith in the New York Journ. of Med., 1852.

A case somewhat similar to that above is related in Schmucher's surgical works. A soldier received a violent blow on the back from the falling of a wall. When extricated he was deprived of sense, and breathed with extreme difficulty. On examination it was discovered that the last dorsal vertebra was luxated on the first lumbar, and had passed three fingers' breadth beyond its edges; this derangement was situated to the right and backwards. The patient was put to bed and laid on his belly, and extension kept up by means of assistants. The surgeon was able, with great difficulty, to reduce the bones, which were again displaced as soon as the extension was relinquished. Four assistants were directed to keep up the extension for several hours, while a fifth retained the bones in their position by compression with his hand. A compress, moistened with spirits, was also applied to the seat of injury, and upon this placed a weight of fifty pounds. On the following day the weight was removed, and a tight bandage substituted, and bleeding resorted to. The patient remained extended on his belly for the space of a fortnight, with the superior part of his chest raised higher than the pelvis, with the intention that the bodies of the vertebræ should be brought into more exact apposition. On the twentieth day he was able to lie upon his back, and at the end of the fourth week his back was sufficiently strong to allow him to sit up; and at the end of six weeks his strength was sufficiently established to pursue his trade, that of a mason.

A very remarkable example of this description is related by Mr. Lawrence.

CASE VII. *Dislocation of the atlas and axis from disease, with consequent ankylosis.* By Mr. Lawrence, of London. Lancet, 1827, vol. xiii.

CASE.—A child, at the age of seven, became the subject of an illness, supposed to be hydrocephalus. A swelling formed in the side of the neck of some magnitude, and obviously containing fluid. Pressure on this swelling affected the brain, producing coma; at length the tumor disappeared. During the progress of the complaint there was no interruption or diminution of sensation or voluntary motion, and the recovery of health and activity was complete. There was nothing particular to attract notice in the position of the head. The child died of disease in the lumbar vertebra, at the age of twelve.

Examination.—The head was examined during the hottest part of last summer, and the brain had become so soft, that the changes produced in it by disease could not be ascertained. Mr. Wigan brought to me the basis of the skull, in which we were surprised at observing a considerable bony prominence standing up in the right side and front of the foramen magnum. The projection in question was smoothly covered by the dura mater, and it was soon apparent that it must be the dentiform process of the second vertebra. When the soft parts had been completely removed by maceration, I found an extensive displacement of the occiput, atlas, and axis, and a firm consolidation of these bones in their new relative positions by the complete bony ankylosis of several articulations. The atlas is partially dislocated towards the left, and at the same time thrown a little forward and upward; hence the right and posterior part of its bony ring intercepts a considerable portion of the spinal canal. The middle anterior protuberance now corresponds to the left side of the basilar process; the extremity of the left transverse process projects three-quarters of an inch beyond those of the two following vertebræ, while the right transverse processes of those vertebræ project one quarter of an inch beyond the corresponding one of the atlas. * * * * The axis

is completely dislocated from the atlas and occiput to the right, so that its left portion intercepts about one-third of the spinal canal, and the dentiform process projects by its whole length into the cavity of the skull, at the anterior part of the foramen magnum, close to the right anterior condyloid foramen. In the natural position of the parts, the apex of this process is a little below the level of the occipito-atlantal articulation; here it is an inch above the same level, while its projection into the cavity of the skull is between five and six-eighths of an inch. The lateral displacement is no less extensive; the measurement from the left anterior condyloid foramen to the middle of the basis of the dentiform process being seven-eighths of an inch, while the distance from the right foramen to the same point is only two-eighths. * * * * The bodies of the second and third vertebræ are displaced towards the right, so that a line drawn along their middle and continued upwards would strike the right margin of the basilar process; and the small tubercle on the anterior arch of the atlas corresponds to the left side of those bodies. The right occipital condyle, the remains of the right transverse of the atlas, the inferior articular plane of the axis, and the right side of the basis of the dentiform process, are anchylosed, so as to form one solid bony mass. The left occipital condyle is partially anchylosed with the atlas; the left articular plane of the axis, its transverse process, and that of the third vertebra, are all consolidated with the partial anchylosis just mentioned. The articular processes of the axis and the third vertebra are anchylosed, the union extending on the left side, as far as the bases of the spinous processes. The bodies of the axis and third vertebra are not anchylosed.

The preternatural bony connections just enumerated are perfect, equalling in solidity the natural bony structure, so that the limits of the anchylosed bones are confounded. The bony texture is quite natural; there is no roughness of surface, no diminution of solidity, nor any appearance of caries. The dimensions of the vertebral canal, at its commencement, are greatly reduced by the extensive displacement of the atlas and axis. The antero-posterior diameter of the foramen magnum is, in this case, one inch and a half; the greatest measurement from side to side, is one inch and a quarter. The diameter of the ring of the third vertebra, from side to side, is seven-eighths of an inch, from front to back six-eighths. The measurement of the canal, between the displaced portions of the atlas and axis, is half an inch from before backwards, and five-eighths of an inch from side to side.

Mr. Lawrence observes, that "the history and examination of this case clearly show, that the opinion originally entertained of its being hydrocephalus was altogether erroneous, that the primary disease was an affection of the articulation, the fluctuating tumor in the neck being a chronic abscess consequent on that affection, while the spontaneous disappearance of the tumor is referable to the cessation of the irritation which caused it. The swelling bore the same relation to the vertebral disease, that lumbar abscess does to disease in the lumbar region of the spine.

Mr. Lawrence has noticed several curious facts connected with this extraordinary case, the most remarkable of which may probably be found in the circumstance of there having been no inconvenience experienced by the patient from the pressure of the dentiform process of the second vertebra on the under surface of the medulla oblongata. That it occurred in a gradual manner there can be no doubt; still, when we take into account the length of the projection, and the importance of the part on which it intruded, the absence of both pain and paralysis is another fact in proof of the extraordinary accommodating principle with which life is endowed.

CASE VIII. *A ball lodged in the spine.* Lancet, 1849.

M. Hutin presented to the Academy of Medicine, on the 25th of September last, a pathological preparation, taken from a disabled soldier, thirty-four years of age, who died a few days previous, of Bright's disease with anasarca. The patient had been struck by a ball, in Algeria, as far back as 1835, on the right lateral surface of the spinous processes of the first two lumbar vertebræ. Paraplegia was the immediate result of this wound, which healed up after a suppuration of three months, without the projectile having been extracted. The pathological preparation placed before the Academy, exhibits the ball implanted in the vertebral canal for the last fourteen years; it was firmly fixed in that situation, and had divided the right half of the spinal marrow, or rather, of the cauda equina, leaving the left half untouched, and merely displaced. The ball is impacted in the medullary matter, which has suffered much erosion.

SECTION II.

INJURY TO THE SPINAL MARROW.

CASE I. *Fracture of the spinous process of the fifth cervical vertebra with compression of the cord, caused by a strain.* By T. B. Ladd, M. D., of Worcester, Vermont. Boston Med. and Surg. Journal, 1852.

J. S., aged 30, was injured Aug. 18, 1850, under the following circumstances: Being engaged in a playful scuffle, he seized his antagonist by the leg, and was in the act of pushing him over backwards; and while in a stooping posture he received a sudden twitch which threw him forward with considerable violence, the head being flexed upon the chest in such a manner that he struck upon the occiput and then keeled over. All present agreed that he could not have received any direct blow upon the neck, as the group was quite smooth. He immediately found himself perfectly helpless. I saw him about three hours after the injury. Complete paralysis and anæsthesia of the body and limbs. Complained of severe pain through lower part of cervical region, extending to top of shoulders. Pressure at this point caused severe pain, as also did any attempt to bring the head forward, yet no deformity or crepitus could be detected. As I had but recently commenced practice, I sent a request to Dr. Deming, of Calais, to see the patient, in the meantime bleeding him from the arm, as he seemed rather plethoric. Dr. D. soon arrived, and made an examination with the same result as above stated.

Next morning febrile action had set in briskly. A catheter was now introduced for the purpose of relieving the bladder, the paralysis of which was found to be so complete that the urine could be made to flow only by the force of gravity. Our next care was to get his bowels to act. Saline cathartics were administered, but had no effect. We then resorted to croton oil, of which he took about twenty-five drops, assisted by stimulating enema, before catharsis was induced. Discharges involuntary. Febrile action soon began to abate. Bowels afterwards moved without much difficulty. In a few days, urine became alkaline and loaded with mucus; afterwards purulent, bloody, and very offensive. During the first forty-eight hours he regained the power of slight voluntary motion in the forearm, after which there was no improvement whatever in motion or sensation. Cups were applied to back of neck, followed by continued counter-irritants. If the blister began to dry, the pain and lameness increased immediately; but under their continued use, both gradually subsided, so that during the last week of his life he could move his head quite freely, and with but little inconvenience.

In about ten days the febrile action mostly subsided, tongue cleaned and

appetite returned; but his flesh wasted rapidly; in fact, the vital powers seemed to be slowly but steadily giving way. He now began to have paroxysms of dyspnoea from collections of mucus in the air-passages, over which he had but little control, the diaphragm having no antagonist. These became more frequent and distressing, until he sank at last exhausted, Aug. 25th, thirty-six days and a half after receiving the injury.

During the progress of the case, he was seen by Drs. Clark and Rublee, of Montpelier, in consultation, both diagnosing some injury to the spinal cord, the exact nature of which could not be made out.

Post-mortem examination, ten hours after death, in presence of Drs. Deming and Rublee. Parts about neck much congested. Removed six inferior cervical vertebræ entire, when it was found that the spinous process of the fifth was fractured laterally through the lamina and pressed down upon the cord. The fragment was with some difficulty removed, in consequence of the inequalities of the broken surfaces. Cord appeared much flattened—membranes entire. On cutting across these, the substance of the cord was found to be mostly absorbed, and what remained was about the consistence of cream; below this point, as far as examined, *slightly* softened.

CASE II. Fracture and dislocation of the vertebræ with compression; reduction; recovery. By W. Parker, M. D., Prof. of Surgery in the College of Phys. and Surg., New York City. New York Journal of Medicine, 1852.

The following interesting case occurred in the practice of Dr. Graves, an eminent surgeon of New Hampshire. A man, aged twenty-five years, of good habits and fair constitution, while engaged, Jan. 2d, with several others, in clearing the snow and ice from the entrance of a railroad engine-house, the door, which run on trucks at the top, being raised by one of the company, fell forwards upon the patient, striking him while in a stooping posture, violently across the shoulders. I saw him soon after the accident; he complained of no pain, but had some tenderness between the shoulders and of the contiguous parts. On examination, I discovered that his lower extremities were completely paralyzed, being deprived of both motion and sensation, as was shown by pinching and puncturing the skin, and by his ineffectual efforts to move them. There was a complete erection of the penis, which continued for several hours. At the seat of the injury, which was at the junction of the lumbar and dorsal vertebræ, there was a marked appearance of displacement of the parts; it seemed to be a fracture and dislocation, or at least a sliding of the body of one vertebra over another. What was to be done for the poor fellow thus suffering with a broken back and paralysis of half his body? Shall I abandon his case to its inevitable termination, as our book surgeons direct, or shall I attempt to replace the parts in their natural position? The latter I resolved to do, if possible. In order to do this, I placed my patient across the bed, lying upon his face, and placing a folded sheet under his arm pits, and another around his hips, I directed four stout men to make extension and counter-extension by means of these sheets. I now put the patient under the influence of chloroform, and when anæsthesia was complete, the extending and counter-extending force was applied, and in a few minutes I was enabled to reduce the displaced vertebræ to nearly a line with the spine. Bony crepitation was distinctly felt when the parts glided upon each other. Patient was now placed in bed, and ordered to be kept perfectly quiet.

Jan. 3. Patient had, during the night, but little pain; slept some; bowels slightly tumid; has passed no water or feces; has considerable swelling and tenderness at the seat of injury, and complete paralysis of the lower extremities. Ordered cups to be applied to the part, followed by cold applications.

4th. Had considerable fever during the night; pulse full and quick; tongue coated; skin dry; had passed no water. Drew off large quantity of urine; continue treatment. 5th. Found patient with high fever and constitutional disturbance; sickness of stomach; vomiting; complained of severe pain at the seat of the injury. Cupped him freely over the spine, and ordered continuance of cold lotions; drew off urine, and gave ol. ricini; used frictions and external warmth to extremities. 6th. Has less fever; slept some during night; less pain in back; no vomiting or sickness of stomach; no passage from bowels or bladder. 7th. Feels comfortable; slept well during night; ordered an enema of warm water to evacuate bowels; used catheter. 8th. Slept well during night; complains of shooting pains between shoulders; bowels were freely opened; used catheter and applied cups to spine. 16th. Patient continues without much improvement; total paralysis of lower extremities and bladder continues; urine passes per stillicidia.

This case continued about the same as at last record, until the sixteenth day, when he began to have slight sensation in the feet; cupping was continued from time to time, and stimulating liniments rubbed upon the limbs. Strychnine was resorted to at a later day, but without any apparent good effect; galvanism seemed to act favorably in restoring sensation and motion; it was continued six or eight weeks, during which time he gradually recovered the use of his limbs, and at the end of this period the passage of urine became voluntary, as also the evacuation of the bowels. Patient soon after left the place and went into the country. I did not see him until several months after, when I was surprised by his walking into my office with only the aid of a cane. He informed me that during his absence, he had continued the use of the battery with marked benefit; there still continued to be a prominence at the seat of the injury.

CASE III. *Paraplegia from injury to the cervical vertebræ; amputation of both thighs without the slightest pain; recovery.* By Wm. D. Purple, M. D., of Greene, New York. *New York Journal of Medicine*, 1853.

L. N. J., of Smyrna, in this county, at the age of 22 years, received an injury from the fall of a limb from a tree, which he was in the act of felling. The limb was a large one; it struck him on the back part of his head, laid the bones of the occiput bare, and spent its force upon the shoulders. It produced a severe injury of the spine, and was called a dislocation of the fifth and sixth dorsal vertebræ. A complete paralysis of all portions of the body below that point was the immediate result.

The precise nature of the injury or the treatment to which he was subjected cannot now be ascertained, as it occurred in Virginia in 1845. He, however, soon recovered his usual health; the wound on the head proved merely external, and the soreness of the injured spine soon abated. A perfect paraplegia was the consequence of the injury; all the nerves of sensation and motion below this point were completely paralyzed, and never in the slightest degree resumed their functions. The abdominal and pelvic viscera, so far as their manifestations could reveal, were entirely beyond the control of volition, nor was there the least evidence of sensation or muscular action. The digestive mass moved regularly, but involuntarily.

The skin of the whole body below the injured part possessed not the slightest sensation, and the line of demarcation between the sensible and insensible parts was so definite, that it could be covered with a thread. Not the slightest trespass of the nerves of sensation could be detected over this line into the domain of the palsied part.

The vital and animal functions of the whole system were normal. The

respiratory and organic nerves were retained in all their integrity. The sympathetic or ganglionic nerves were uninjured. Respiration, circulation, digestion, secretion, and assimilation, were performed in all their perfection. There was a sensible increase of the frequency and volume of the circulation, and respiration was noticed to be slightly increased in frequency from the normal standard. The weight of the body was greater after than before the injury, and the lower limbs retained their normal heat and physical development.

The patient evidenced an unusual share of mental vigor after the injury, and possessed a resolution and determination that was truly surprising in his forlorn and helpless condition. He travelled almost constantly, and spent nearly all his time upon his back in his carriage. He threw himself into the arena of excitement, and for years was a votary at its shrine. Where there was the greatest crowd, there he chose to be. The travelling circus or the military parade, usually found him in their midst.

In 1851, six years after the injury, he presented himself to our County Medical Society, and requested the amputation of his lower extremities. He insisted upon its performance with his wonted resolution and energy. His reasons were that they were a burdensome appendage to his body—caused him much labor to move them, and that he wanted the room they occupied in his carriage for books and other articles for peddling. These reasons were not sufficient to induce a majority to consent to an amputation, as, independent of the horrors of so extensive a mutilation for such reasons, there were fears that the vitality of the vegetative existence enjoyed by his limbs was such as might endanger a healthy healing process.

The patient, nothing daunted by our reasoning, firmly resolved to cast off the offensive limbs as a useless burden on the rest of his body, sought other counsel, and succeeded in getting his wishes gratified. Both limbs were amputated near the hip joint *without the slightest pain or even the tremor of a muscle*. The stumps healed readily, and no unfavorable symptoms occurred in the progress of a perfect union by the first intention. In this mutilated condition he was unable to move his pelvis in the slightest manner without the greatest effort by the aid of his hands.

He then resumed his former wandering life, and travelled over this and portions of the adjoining States until May, 1852, when he was arrested in this village by his last disease, which suddenly terminated his life.

He died with all the symptoms of disease of the digestive functions consequent upon his bacchanalian propensities, to which he had been strongly addicted since the injury. He was very excitable, and the smallest quantity of spirits irritated the brain to the utmost frenzy. His irritable characteristics were unbounded, and although he was in the most helpless condition, he was converted from a man of a mild and amiable disposition to one of the most irritable of the human family. His energy, his force of character, and his mental powers generally were very much increased by the narrow limits in which his sentient powers were confined.

CASE IV. *Complete dislocation of the fourth from the fifth cervical vertebra without fracture.* By Mr. Lawrence, of London. *Lancet*, 1827, vol. xiii.

The possibility of the occurrence of complete dislocations of the vertebræ without fracture, has long been a disputed point among many of the first surgical writers. Boyer and Sir A. Cooper are of opinion, that such an accident cannot happen; and Delpech, in his *Précis Élémentaire des Maladies réputées Chirurgicales*, asserts, without qualification, that a careful examination of the form and situation of the bones, must convince the observer that such

accidents cannot occur. The following case, however, related in an excellent paper by Mr. Lawrence, sets the question at rest:—

CASE.—Charles Butcher, twenty-two years old, was admitted into the hospital at five o'clock P. M., January 8. He was completely insensible, incapable of voluntary motion below the neck. Had slipped in descending some steps, and fell on his buttocks, whilst carrying a heavy barrel on the back of his head and neck. Functions of the brain not disturbed; respiration apparently performed merely by the diaphragm; pulse weak and slow; body cold; penis in a state of permanent erection. No irregularity of the spinous processes could be discovered. In four or five hours pulse became full and strong, heat of body greater than natural, respiration rather hurried. Venesection to $\bar{x}xvj$; a dose of calomel and jalap. Four ounces of urine drawn off by the catheter.

Jan. 9. Pain at lower part of the neck. Can move the arms slightly, and has a little feeling in the front and upper part of the chest. Dark offensive stools pass involuntarily; respiration slower; pulse full; heat natural.

10th. Feels better. Slept three or four hours in the night, for about an hour each time; has experienced a trying sensation in the hands, and is sensible to impressions on the upper part of the arms and thighs; stools pass involuntarily; complains of distension of the bladder; eighteen ounces of high-colored urine were drawn off, and deposited a dark brown sediment. The priapism continues. Four ounces of urine drawn off in the evening.

11th. Has not slept during the night, and is worse this morning. Respiration becomes more difficult, so that speaking requires a painful effort; countenance expresses distress and anxiety. He expired at one o'clock on the morning of the 12th.

Examination.—No displacement nor irregularity could be discovered by external examination, when the body was laid on the face. After cutting away the muscles from the back of the spine, the cartilaginous surfaces of the superior articular processes of the fifth cervical vertebra came into view; they were exposed in consequence of the inferior processes of the fourth vertebra having been *completely dislocated forwards*, and remaining fixed in their unnatural position. The yellow ligaments connecting the laminae of the two vertebrae were torn through, and the bifid apex of the fourth spinous process lay in close contact with the basis of the fifth. On the front of the column an unusual projection was observed, but the anterior longitudinal ligamentous expansion was entire. *The body of the fourth was completely detached from that of the fifth vertebra, the connecting fibro-cartilage being torn through, and the body of the former projecting by its whole depth in front of the latter.* * * *

It is not the least curious part of this interesting case, that no deformity in the bones of the spine could be discovered by external examination. Mr. Lawrence also states, “that, on a cursory view of the patient, there was nothing alarming in his situation.” These facts, connected as they are with the great extent of injury which the vertebral column had sustained, ought to act as a warning to practitioners against giving a hasty and inconsiderate diagnosis or prognosis in accidents of the vertebrae.

CASE V. *Complete dislocation of the fifth from the sixth dorsal vertebra, without fracture.* By M. Robert, of Paris. Ranking's Abstract, 1854.

This accident occurred to a man, æt. 25, who was engaged in elevating a ponderous scaffolding pole. He appears to have been standing in the deep hole which was prepared to receive the end of the pole, with this end resting upon the upper part of his back, when his strength failed him, and the pole descended and crushed him over the edge of the hole. On extricating him—

self, the lower part of his body was found to be completely paralyzed; but no projection of vertebræ could be detected in the back. He died eleven days after, without experiencing any relief, head symptoms having supervened towards the close of life. After death, the body of the fifth vertebra was found separated from the body of the sixth. The body of the sixth vertebra was projected inwards into the mediastinum, in which space a considerable quantity of blood was effused. The anterior and posterior great common ligaments of the spinal column were completely torn asunder at the point, as was also the intervertebral substance, a small portion of the latter remaining attached to the body of the fifth, and the larger portion to the body of the sixth vertebra. The articular processes of the dislocated vertebræ were completely separated, the superior articular processes of the sixth vertebra being carried quite in advance of the inferior articular processes of the fifth vertebra. The ligaments connecting these processes, except those made of elastic tissue, were ruptured. The spinal marrow was diffused for some distance above and below the point of dislocation, but the injury of the bones was confined to a single articulation.

CASE VI. *Luxation of the cervical vertebræ without fracture.* Lancet, 1837, vol. xxxiii.

A case of this very unusual accident was brought to the hospital on the morning of the 12th. It appeared that the patient, a carpenter, thirty-five years of age, was on the previous evening sitting on a rail, about four feet in height, when he fell suddenly backwards, pitching on the ground with considerable force, and falling, as he supposes, on his shoulders, and the lower part of his neck. He was quite sober at the time. On being taken up he was found to be sensible, but the use of both his arms and legs was entirely lost. He was removed to a beer shop in the neighborhood, where he remained during the night, and in the morning, at nine o'clock, was brought to the hospital. He was sensible on his admission, and free from pain when he remained at rest. When he was moved, however, he complained of great pain across the shoulders. The upper and lower extremities, and almost the entire trunk, were completely paralyzed, both as regarded sensation and motion, which were, however, natural in the head, neck, upper third of the thorax, and a few inches below the shoulders. The breathing was oppressed, and carried on almost entirely by the diaphragm; the countenance rather anxious, the surface warm, pulse natural. Since the accident, he has passed neither urine nor feces. He was ordered an enema, and the urine was drawn off by the catheter.

Two P. M. Seems restless; countenance indicates greater anxiety: the breathing is more oppressed; there is slight loss of power on the left side of the neck; the articulation is impaired: the abdomen is tympanitic; tongue dry; much thirst.

Five P. M. Restlessness increased; he is continually rolling his head from side to side; the muscles of deglutition on the left side are paralyzed; great thirst; dry and foul tongue, which, when he attempts to speak, protrudes at the left angle of the mouth; great difficulty of deglutition; difficulty of breathing and anxiety of countenance increased. His urine has been escaping involuntarily for some time; at half-past six twelve ounces were drawn off by means of the catheter. He got gradually worse, and died at eight P. M.

The autopsy was performed eighteen hours after death. The blood, which was perfectly fluid, was much effused between the posterior muscles of the neck. There was complete luxation between the fourth and fifth cervical vertebræ, the latter being thrown backwards. The proper ligaments of the

vertebræ were lacerated, as were also some of the tendons of the longus colli muscle. *There was no fracture of the articulating processes.* On opening the vertebral canal the cord was found to be compressed between the arch of the fourth and body of the fifth cervical vertebra; the membranes of the cord were not much injected. The cord appeared a little softened at the compressed portion, but otherwise its texture was unaltered. The examination was not conducted further. Mr. Liston pointed particularly to the fact of there being no fracture, a very unusual circumstance in accidents of this description, and the absence of which rendered the case peculiarly interesting. Had the precise nature of the accident been ascertained, it is probable that an attempt at reduction might have been made.

CASE VII. Extensive trephining of the vertebræ for compression of the spinal cord. By H. A. Potter, M. D. Reported by the Drs. Hurd, of Michigan, for the New York Journal of Medicine, vol. iv., 1845.

On the 23d of February, 1844, Oliver Eddy, of Union, Branch County, Michigan, an athletic, healthy young man, aged about 21 years, while engaged in felling a large basswood tree, was struck down by the falling of a limb. The limb, which was five inches in diameter, and seven feet in length, fell, without obstruction, from the height of about sixty feet, and was seen, by the man at work with him, to hit him upon the back of the neck, as he stood leaning slightly forward. The blow produced no bruise or discoloration, although it left him senseless, in which state he was carried to the house, a distance of nearly one-third of a mile. By this time, the breathing had become stertorous, the whole surface was cold, the pulse slow and almost imperceptible, continuing thus through the night, notwithstanding warmth, friction, and stimulants were perseveringly used.

On the morning of the 24th, he was bled freely but without any perceptible improvement. The stertorous breathing continued, and the pulse remained small. He vomited often during the day, and hiccoughed occasionally. The expression of his countenance was bad. A cathartic of sal. Epsom and senna was administered, and by the aid of an enema, an operation was secured in the course of the day, still without improvement.

On the morning of the 25th, the catheter was introduced. During the day, and for the first time, he was aroused from his insensibility, though immediately after he relapsed again into a state of lethargy. During the night his pulse sank; vomiting followed at short intervals, a general coldness pervaded the body, and death seemed about to close the scene.

On the 26th the vomiting subsided, warmth was restored, the patient was easily aroused, his pulse was at about seventy, and he received some nourishment. On this and the following day, large quantities of pus passed from the bladder after the catheter was withdrawn; and from this time the discharge of pus was enormous, amounting to from a pint to a quart daily, for two weeks or more. These discharges were exceedingly offensive; nor did they abate till some time in the third week, when abscesses formed on the back, covering for awhile almost the whole dorsum. The muscles over the sacrum sloughed off, leaving the sacrum bare. One abscess formed in the glutei muscles, and extended down to the knee. Upon opening this, it discharged nearly a quart of healthy pus, and continued afterwards to discharge daily from half a pint to a pint for several weeks.

There was no motion or sensation below the upper part of the thorax. The patient could not tell when he was pricked, nor handled, unless moved so much as to stir his neck; in that case the sensation was very great. Walking across the floor so as to jar his bed, caused great pain.

At the expiration of about three weeks from the occurrence of the injury, his general health had considerably improved; his appetite was good, his skin became soft and natural, he rested well at night, and nature seemed to be accommodating herself to his condition. This favorable state continued some eight or ten days, when the symptoms became again unfavorable—such as restlessness, much of the time contracted and shrivelled skin, resembling, more than anything else, that upon the leg of a turkey; pulse small and quick. In this condition he remained for a week, affording but little hope that he could survive; when, unexpectedly, he began to improve again, which he continued to do for another week. Then followed a like period of unfavorable symptoms, attended with hectic fever. Thus nature seemed to strive with the injury, alternately gaining and losing, until about the first of May, when the improvement became more permanent. He gained some flesh, healthy granulations formed around the abscesses, the upper part of the back cicatrized over, the discharge from the abscesses diminished, and it seemed somewhat probable that, if he did not entirely recover, he might still live for a considerable time. However, near the last of May, after the discharge from the abscesses had materially lessened, he began to expectorate pus, and his general health appeared to decline.

It will be proper at this point to give some account of the treatment which we pursued during this period. After making use of stimulants, cathartics, venesection, &c., we had recourse to cupping and blistering, although without obtaining the desired results. Having seen ergot recommended by M. Payan, in *Braithwaite's Retrospect*, as operating primarily on the spinal cord, and successfully used in paraplegia, and likewise in cases of injury of the spine, we concluded to try that, which we did, administering it in drachm doses for about ten days. No effect, however, was perceptible, except that it appeared to operate as a diuretic—from three to four quarts of urine being discharged in twenty-four hours, which (as well as the pus before mentioned) was exceedingly offensive. We next employed nux vomica (not having strychnine), in substance and tincture, but with no better effect. After the hectic symptoms appeared, we made free use of tonics, and allowed the patient a generous diet. Thus he continued for more than three months unable to move a finger, or a toe, or to tell by feeling when he was handled.

On the 3d of June, Dr. H. A. Potter, then of Bethel, Ontario Co., N. Y., but now a resident in the neighboring village of Battle Creek, Calhoun Co., this State, while passing through our place, called on us, and we invited him to visit our patient, which he did. After careful examination of the case, he pronounced it compression of the spinal cord; and suggested that it might be removed by an operation. But as he had never heard of an operation being performed in the like instance, it was with some delicacy that he recommended this course. It was, however, deemed best, and was readily assented to by the patient. Accordingly, on the following day, in the presence of Dr. Hanchett, of Coldwater, and his two students, ourselves, and some of the friends of the patient, Dr. Potter performed the operation. He commenced by making a bold incision from the second cervical to the third dorsal vertebra, directly over the spinous processes. He next, with much difficulty arising from the collection of ossific matter, separated the integuments from the spinous processes down to the body of each vertebra, removed the processes, and made an incision into the intervertebral substance, between the third and fourth cervical vertebrae, so that he could introduce the end of his forceps. It should be remarked here, that, after trying many different instruments without effect, he at length resorted to the bone forceps, commonly found in amputating cases, with which the bone was readily sheared; and it is thought

that this or a similar instrument will be found to answer the best service in like cases. He then proceeded to remove the spinous processes and portions of the vertebræ, piece by piece, till he came to the spinal cord, when, as soon as there was room, he introduced the handle of a small scalpel under the compressing vertebræ, so as not to injure the cord, while he continued to use the forceps. Proceeding in this manner, he removed parts of the four inferior cervical and the two superior dorsal vertebræ. The vertebræ were so much ossified, as to render it extremely difficult to ascertain the precise point of compression. There appeared, however, to be but four that were fractured so as to produce compression, although the spinous processes of the two inferior ones removed, were more or less fractured. In the whole, ossification had taken place.

All the physicians present had an opportunity of observing the spinal cord, and of seeing and feeling its pulsations. Before the operation ended, the patient said he felt as though we were pricking him all over. Sensation appeared to return almost instantaneously, and for the first time that he was conscious of it, below the compression, after the receipt of the injury. There was very little hemorrhage, not enough to make it necessary to tie an artery. The patient bore the operation remarkably well. Four or five hours afterwards, we saw him, and he could readily tell which foot or toe we touched. Sensation was nearly perfect, except in the limb in which was the abscess:—in that it was less natural. He had some difficulty in expectorating, which had existed for several days previous; otherwise he rested well. The discharge from the abscesses, which, for four or five days, had been somewhat diminishing, now entirely ceased. From this time, pus was expectorated in large quantities. The wound made by the operation gave but little trouble. Healthy granulations formed and filled up the cavity, and cicatrization commenced around the margin. But the expectoration and difficulty of breathing increased; and the patient died on the 22d of June, eighteen days after the operation, and four months from the time of receiving the injury, apparently from suppuration of the lungs, but little inflammation having ensued from the operation.

We think that the operation, if it had any effect upon his life, tended to lengthen it; and had it been performed at an early period after the injury occurred, we are of opinion that his life might have been saved. The operation, which occupied about forty-five minutes, was well and skilfully performed. From our particular acquaintance with this case, we are clearly of opinion that, in all similar cases, a similar operation should be performed.

What were the *post-mortem* appearances of this unique case?

CASE VIII. *Fatal luxation of the dentatus on the third vertebra of the neck.* American Journal Med. Sciences, vol. xv., 1834.

E. D., aged fifty, a man of hale constitution and robust, in making an effort to scale a board fence, was suddenly precipitated backwards to the ground; striking first upon the superior and anterior portion of the head, which luxated the dentatus anteriorly on the third cervical vertebra. He was at length discovered, and taken in (as the patient said), after he had lain nearly an hour, in a condition perfectly bereft of voluntary motion; but being present I did not even suspect that the power of sensation was also gone, until the patient (whose speech remained almost or quite perfect, and who was uncommonly loquacious at that time) said, did he not know to the contrary, he should think he had no body. His flesh was then punctured, and sometimes deeply—even from the feet to the neck; but the patient gave no evidence of feeling, and when interrogated answered that he felt nothing; “and,” added

he, "I never was more perfectly free from pain in my life," but he remarked that he could not live, and accordingly sent for his family, twelve miles distant, and arranged all his various concerns in a perfectly sane manner.

The head was thrown back in such a position as to forbid his seeing his body. The pulse was much more sluggish than natural. Respiration and speech but slightly affected, but were gradually failing; but he could articulate distinctly until within a few minutes before his death. All the senses of the head remained quite perfect to the last. He died forty-eight hours after the fall.

Repeated attempts were made to reduce the dislocation, but the transverse processes had become so interlocked that every effort proved abortive. There was, undoubtedly, in this case, a perfect compression of the spinal marrow, which prevented the egress of nervous influence from the brain, while the pneumogastric nerve remained unembarrassed.

CASE IX. Fracture of the fifth cervical vertebra by muscular contraction; death.

In the *Archives Générales* for March, 1827, a case is recorded as reported to the Royal Academy of Medicine, on the 8th of Feb., of a soldier, a good swimmer, who plunged headforemost into the river Sombre, and was taken up in an insensible state, by his comrades. On reviving, his limbs were found paralyzed; skin insensible. The patient could not support his head, and experienced a severe pain at the posterior and inferior part of the neck.

Priapism, with frequent desire to urinate, was present. He stated that immediately on plunging, he found the depth of water inconsiderable, and had suddenly thrown his head back that it might not be injured: from this moment he lost all consciousness.

The patient died, and on opening the body a bloody infiltration was discovered around the cervical vertebræ; the spinal canal outside the dura mater was filled with blood. This membrane, as well as the spinal marrow, was uninjured, while a transverse fracture of the body of the fifth cervical vertebra, a little below the middle, was noticed.

CASE X. Dislocation and fracture of the spine. By Gardiner Dorrance, M. D., of Amherst, Massachusetts. *American Journal Med. Sciences*, vol. xvi., 1835.

About six years since, Amos Marsh, of Sunderland, while at work in the woods, was struck by a falling tree, and bent to the ground. I saw him soon after he was removed to his house. I found him in bed, saying, that both his thighs were broken. Finding them straight and firm, I suspected loss of sensation in them from injury of the spinal cord. Turning him to his side, I found an angle, at the eleventh dorsal vertebra, of forty-five degrees.

It looked like so easy a thing to make the spine straight, that I could hardly resist the inclination to put it so; and the bystanders were impatient at my hesitation to do it. I supposed there was partial dislocation of the vertebræ, which any attempt at reduction would probably make a perfect one. I knew, too, that dislocation could not take place without fracture of the spinous or transverse process, and that loose spiculæ of bone would very possibly be driven into the spinal marrow, and cause instant death. A consulting physician, who saw the patient some hours after, was anxious to attempt a reduction; and when dissuaded from that, proposed cutting down and removing the broken and probably depressed fragments of bone. It was, however, concluded to trust the patient to nature, using bleeding and low diet to prevent, as far as possible, inflammatory action in the injured part.

Mr. Marsh had, for a number of weeks, almost perfect paralysis of the lower limbs, and of the lower abdominal viscera. Urine was drawn off by the catheter, and the bowels moved by stimulating injections. By degrees, sensibility and mobility returned to the limbs, and the bladder and rectum resumed their functions. In four months the patient walked with crutches, and in six, with a staff. In less than a year, he resumed his trade, that of a cooper, and he now performs as much labor, sometimes in his shop, and sometimes in the field, as most men of his age. There is a stooping of his back, and a sideway motion to his gait. The vertebræ are not in place, though more so than at first, and I believe much more so than art could have placed them.

The palsy of the parts below the injury, shows that the spinal marrow was compressed, either by displaced vertebræ, or by the depression of their spinous processes. Nature has by some means gradually removed the compression. In the hurry and agitation of such an accident, the physician wants some rule of practice to guide him. From the fatality or permanent paralysis of the lower extremities, which have attended all the cases I have known of, where reduction of dislocation or removal of depression has been attempted, I consider the favorable result in the case of Mr. Marsh may encourage us to wait and hope. The curative powers of nature are often greater than we are disposed to believe them.

CASE XI. *Paraplegia following a gunshot wound in the spine; tickling the penis provoking the bladder and rectum to discharge their contents.* By Charles S. Tripler, M. D., Surgeon U. S. Army. New York Journal Med., 1851.

During the protracted war with the Seminole Indians in Florida, an officer, travelling from St. Augustine to Picolata, was waylaid and wounded by a party of those savages. He was seated upon the floor of a common baggage wagon; the ball passed through the side of the vehicle before striking him. He was shot on the line of the union of the last dorsal with the first lumbar vertebra—the ball penetrating at the angle of the ribs, on the right side, two inches above the vertebra, and passing in a direction obliquely downwards and toward the spine. The general direction of the wound was ascertained by the probe, but the ball could not be felt, and where it is lodged, remains a mystery to this day.

This took place on the 25th of November, 1839. The immediate consequences were loss of motion and sensation below the wounded part, though the sensorial recognition of the lower extremities was that of numbness and tumefaction. When he was received into the hospital, bottles of hot water were applied to his legs, with the effect of causing deep eschars very rapidly, but without producing any sensation. The gunshot wound healed very readily, leaving the patient in the following condition: The line of normal sensation began in front, at the anterior superior spinous process of the ilium, descended almost in the direction of Poupart's ligament about half its length, then curved upwards, passed just below the umbilicus, described a similar curve on the other side, and then passed around the back, in nearly a right line, to the point of departure.

The bladder and the rectum were paralyzed; the one was relieved by the catheter, the other by castor oil. The use of the oil was continued for about two years; afterwards, enemata were substituted; lavements of water are still used occasionally. The fæces are passed without sensation. The catheter was used for about a year, or a little more. About the beginning of the year 1841, he found that the bladder could be induced to contract, by tickling the side of the penis, just behind the corona glandis; and he afterwards discovered

that the same manipulation would provoke the rectum to discharge its contents; no sensation, in the meanwhile, being transmitted to the sensorium.

He thinks that titillation of the left side of the penis affects the rectum more than the same operation upon the right.

No sensation of distended bladder calls for relief; but contraction of the toes and abduction of both thighs, occur at this time, warning the patient of the wants of nature.

Priapism was readily excited, for a time, by friction upon the back or breast; but this seems to have subsided of late years.

The flexors of the toes are permanently about half contracted; by tickling or jerking up the scrotum and testicles, these muscles may be made to act spasmodically.

The temperature of the paralyzed parts is good. He thinks he feels more and more, from year to year, a consciousness of the existence of the limbs, and by an effort of the mind, to fix attention upon them, they ache so much as to render it necessary to desist.

There is not so much corpulency of body as is usual in such cases, nor are the paralyzed extremities so much atrophied as we might expect.

All sorts of counter-irritations, hydropathy, homœopathy, electricity, strychnia, &c., have been resorted to, but without benefit. In 1844 or '45, while trying the sulphur vapor, a jet of hot vapor was thrown upon the sole of the left foot, and took off the whole integument, he being totally unconscious of any sensation.

The urine was ammoniacal and purulent for the first three or four years, but has been less offensive since. If he assumes the erect position, leaning upon his crutches, to empty the bladder, the urine is less offensive than when he is obliged to lie in bed for a few days.

The color of the limbs is natural. He assures me that they were, a few years ago, more sallow and more atrophied.

CASE XII. Fracture of the spine in a patient having an immense congenital diaphragmatic hernia. By Henry J. Bowditch, M. D., of Boston, Massachusetts.

This extraordinary case appears as an original communication in the June number, 1853, of the *Buffalo Med. Journal*, bearing the lengthy caption of "Peculiar Case of Diaphragmatic Hernia, in which nearly the whole of the left side of the Diaphragm was wanting, so that the stomach and a great part of the intestines lay in the left pleural cavity, compressing the left lung, and forcing the Heart to the right side of the Sternum." This condition, evidently congenital, existed in a man who died at the Massachusetts General Hospital, with fracture of the spine, caused by a heavy blow upon it.

The following imperfect notes of the case were obtained from the records kept by the surgeons of the hospital. I examined the youth on the day of his entrance, in order to observe the effects produced on the action of the heart by so severe an injury as fracture of the spine. I was much surprised to find the signs detailed below, and was satisfied that the intestines were in the left pleural cavity. I supposed that there had been rupture of the diaphragm at the time of the accident. On several subsequent examinations, every one, I believe, coincided with me in this diagnosis, as to the fact of the altered position of the alimentary canal. The case I believe to be wholly *unique*, in certain particulars, viz., in the preservation of life and tolerably good health for so many years, whereas it appears from recorded cases, that death usually supervenes, either immediately after birth, or at a very early age, in the vast majority of such cases.

Sept. 29, 1846. F. L., æt. 17, laborer, entered the hospital with fracture of the spine. It appeared that when a child he was surprised, on comparing his chest with those of his school-fellows, to find that his heart did not beat as theirs did, but to the right of the sternum. He had been troubled all his lifetime with palpitations of the heart, and by frequent "stitches" in the left side; and often had attacks of total unconsciousness, by which he was for some time wholly disabled.

Sept. 25. While resting from his work of raising a piece of timber, the derrick he had been using, broke, and fell, striking him about the middle of the back, and fracturing the spine.

The manner in which the blow was received cannot be exactly ascertained. The only facts obtained are, that he was sitting down at the time, when the derrick swayed, broke, and struck him on the back, probably not directly.

The effects of the accident were temporary loss of consciousness, paraplegia, and imperfect anæsthesia below a line drawn around the body through the umbilicus, and severe pain in the left chest and abdomen, which diminished after two days. The accident occurred at Gloucester, where he received medical treatment. A catheter was passed twice daily, and two or three cathartics given. On the fourth day, he was brought to the hospital on a litter.

On examination.—Intellect unaffected. Skin hot. Pulse 132. A protuberance on the back, occasioned by the spinous processes of the three lower dorsal and first lumbar vertebræ. Complete paralysis of lower extremities, with slight degree of insensibility. Fulness and dullness on percussion at hypogastrium.

Pulsation of heart natural, but entirely to the right of median line. Respiration thoracic. Right chest laboring more than left. Left chest more prominent than right, both in front and at side. On percussion, left front chest highly resonant as far as a line dropped from anterior boundary of axilla. Beyond that, dull, even on the back as far as median line. Right chest natural.

On auscultation.—No respiration over whole of left chest except from the clavicle down to the space between the second and third ribs. In its place a mixture of gurgling, whistling, and blowing sounds was heard, like those heard over the abdomen, and produced by flatus and intestinal motion. These were not generally affected by cough or inspiratory effort, though sometimes excited by either. No bronchial or amphoric sound. Metallic tinkling occasionally. Voice natural. Impulse and sounds of heart most distinct at right of sternum.

Diagnosis.—Probable rupture of diaphragm and intestines in left chest. Catheter was passed. Elixir opii, gtt. xxx given, and patient left for the night.

Sept. 30. Slept well. Had no pain. Pulse 132.

Oct. 1. Lies quiet; makes no complaint except of flatus. Enema; laxative diet.

Oct. 13. An amphoric sound, with metallic tinkling, is occasionally heard in left front chest, most intense over cartilages of fourth and fifth ribs. It seems rather stomatic than pleuritic, or pulmonic, its tone being very sharp; it is but slightly affected by the respiratory act.

Oct. 15. Respiration labored. Cough frequent. Throat is clogged with mucus, which he raises with great difficulty. Urinary bladder seems to contain air. It is resonant up to umbilicus, but found contracted on the catheter being used.

Oct. 17. Very feeble. Does not readily answer. Appetite quite good. Auscultatory sounds the same. Mouth sore.

Oct. 18. As yesterday. Urine passed freely by catheter. Bladder is felt in hypogastrium as a small, hard, round tumor.

The above detail of symptoms is sufficient for my purpose. The patient died Oct. 20.

The post-mortem examination was made very hurriedly, owing to circumstances beyond our control. The trunk presented no unusual appearance in front. Abdomen moderate in size, certainly not distended. On raising the sternum, the stomach, the major part of the colon, and several folds of the small intestine, with the omentum, were found in the left chest. These organs were much distended with flatus, but appeared perfectly healthy. No trace of recent lymph or injection about them on the pleura. The lung was compressed to the greatest degree, and looked like a lung that had been confined by a pleuritic effusion, save that it had not the usual *sodden* aspect observed in pleurisy. The heart was pressed to the right side, but that, with the right lung, was healthy. The liver, resting upon the right side of the diaphragm, was normal. The spleen was healthy, and in its usual situation under the left ribs. The bladder was seen above the pubes, and contained about half a pint of purulent, flaky-looking, very offensive urine. A fold of small intestine was adherent to its fundus, by soft adhesions, and extended from there to the umbilicus, and was much distended with air. The coats of the bladder were dark and gangrenous. The diaphragm was perfectly healthy at the right side, but was almost wholly wanting at the left. It consisted—1st. Of a triangular piece extending from front backwards. This was $5\frac{1}{2}$ inches long from sternum to spine, and only $2\frac{1}{2}$ inches broad at its base, which was attached to the sternum and cartilages of ribs. Toward the spine it presented an opaque, whitish, rounded, somewhat cord-like aspect. On examination it was found composed of a muscle, and on each side was serous membrane, viz., pleura and peritoneum. Near the sternum and vertebrae, for the space of about an inch, these two membranes were united, and smoothly so, the line of demarcation in the part near the spine being invisible, while in that toward the sternum they were joined by a cellular structure. The intervening space showed the muscle about $\frac{1}{4}$ inch thick, and the two membranes firmly attached to it. 2d. There was a small semilunar portion only of the diaphragm near the spleen, lying by the side and a little underneath the intestines, that had passed into the thorax. But over the whole of the breast and a good part of the side, the peritoneum and pleura seemed continuous, forming one large smooth cavity.

It was evidently a foetal arrest of development.

CASES XIII., XIV., and XV. *Three cases of partial paralysis from punctured wounds of the spinal marrow.* By Thomas Peniston, M. D., of New Orleans, Louisiana.

These we find in the July number, 1851, of the *New Orleans Med. and Surg. Journal*; the last two were adduced at a trial to sustain the position that in the first case the patient had been seriously and permanently injured by the blow received in the spinal region.

Partial paralysis of the right leg, caused by a stab with a dagger, received between the tenth and eleventh dorsal vertebrae.

D. V—, aged thirty-four, constitution good, health usually good, with the exception of an illness in 1840, which began with a swimming in the head, followed by severe headache, fever and delirium; after the violence of the

first symptoms had subsided, felt an extreme prostration throughout the body ; was confined to his bed, as near as he can recollect, some five or six weeks.

The treatment consisted in repeated leeching—does not know where to, as he was unconscious of passing events for several days. Two months after, he had so far recovered his strength as to be able to resume his former occupation—that of Deputy Sheriff—which required almost unceasing bodily exertion.

In 1844, had an attack of intermittent fever, which lasted him nearly three months ; was not confined to his room ; does not recollect whether he had the chills every day, or every other day ; took the various prescriptions of Peruvian bark without any material benefit ; eventually got well, after a change of air, over the Lake (Bay St. Louis), where he remained several months.

On the 23d of August last, received a stab, from behind, with a dagger, which penetrated somewhere between the tenth and eleventh dorsal vertebræ, a little to the right of the spinous processes, producing instantaneous paralysis, of both motion and sensation, in the left leg. Did not feel the stab, and was unconscious of the injury, until he found himself on the floor, and unable to rise. He then experienced a coldness, or chilly sensation, in the back. Considerable hemorrhage took place immediately after the stab, but soon ceased, of itself. He suffered a good deal of pain, in the wound, for several days ; during which time, the least change of position of the paralyzed limb would occasion spasmodic movements, causing immediate extension of the member—and over which he had not the slightest control. Thinks his situation has sensibly improved, until within the last three months, since which time things appear stationary.

Treatment.—The wound was not probed. The edges were brought together, and maintained with a strip of adhesive plaster. It healed up readily, in a few days. Stimulating frictions and sea bathing were afterwards advised—the latter, Mr. V—— thinks, with much benefit to the limb.

April 1, 1851. *Actual state.*—The general appearance of Mr. V—— is that of a stout, athletic man, in the meridian of life. His face and skin generally are pale, as though he had been deprived of proper air or exercise. Says he suffers no pain, and sleeps, eats and digests well ; sustains himself with difficulty in the erect position ; cannot walk without the aid of a crutch or stick. The limb appears, to the eye, longer than the opposite one, and has, while in motion, the loose, dangling appearance characteristic of paralysis. The foot is turned slightly outwards ; there is no perceptible difference in the temperature of the two limbs—though it may have existed ; as Mr. V—— remarks, that he had more difficulty in keeping it warm, in cold weather, than the other. The muscles of the paralyzed limb appear flaccid, and have lost the elastic feel and prominent outlines of those of the other member. Accurately measured, midway between the great trochanter and the knees, the circumference of the thigh is from four to six lines smaller than the well one ; around the calf of the leg, there is a difference of three or four lines. The scar, as has already been observed, is situated between the tenth and eleventh dorsal vertebræ ; is eight or ten lines long, and three or four wide in the centre ; the direction is obliquely downwards and outwards, to the axis of the spine, so that the upper angle is four or five lines from the median line, whereas the lower one is from six to eight. There is, now, no pain, or sensibility about the scar. While questioning Mr. V——, I was struck with the very remarkable dilatation of the pupil of the left eye, to near double the size of the other, and which, Mr. V—— says, dates from the illness of 1840. He attributes it to an opium plaster prescribed by the attending physician, and applied to

the left temple. States that he sees equally well with both eyes—the only difference being in their capacity of bearing fatigue. The focus of vision appears the same in both eyes. The iris is almost insensible to the impression of light; its color and general appearance are the same as the other. The interior of the eye looks natural.

This case, in which the injured party brings suit for the recovery of \$20000, damages, came up for trial before the Third District Court, on the 21st of last month. Medical testimony was introduced, to enlighten the court as to the antecedents, the real cause, and probable consequences, of the injury.

Partial paralysis from the blade of a knife broken off in the cervical vertebrae.

Lafontaine, aged 59 years, quartermaster in the Municipal Guard of Paris, received, on the 21st October, 1840, a wound by a sharp and pointed instrument, in the back part of the neck. Struck from behind, he immediately fell down and was unable to rise. From his own relation, it might be supposed that he had been wounded by a heavy weapon—some sort of a club surmounted with sharp points; and that he fell, not from the effects of a wound inflicted by the latter, but from the violent commotion which he felt simultaneously with the stroke. The fall was backwards and towards the right side. Possessing great energy, Lafontaine not only remained conscious after the injury, but observed the result with a good deal of sagacity. Taken up and removed to quarters, he had no idea of the gravity of his situation; and the wound in the neck being brought together by a strip of adhesive plaster, he refused to have himself bled, as was proposed. On the next day, 22d, he was taken to the hospital of Val-de-Grâce. Saw him in the evening—*complained of no pain*, but remarked that he felt a *slight numbness in the right side*. The next day, 23d, a more attentive examination gave us the following particulars: the solution of continuity perfectly reunited, is transversal, little over a half inch in length (thirteen millimetres), situated on the right side of the back of the neck, in the region of the fifth cervical vertebra, and about an inch from its spinous process. Its angles are both equally sharp; which would indicate that the wounding instrument was sharp on both edges. * * * * The movements of the head and neck remained perfectly free, and gave rise to no disagreeable sensation.

The wounded man complains of a *weight in the right thoracic member*, and a crawling sensation in the hand (fourmillement); he can, however, though with some difficulty, raise the arm and move the forearm, but the fingers, half closed, cannot be extended or shut but very imperfectly, and without pressing the object within their grasp. *The right abdominal member cannot accomplish the least movement*. A vague pain is felt along the posterior half of the right side of the chest. Everywhere—in the arm, the chest, the pelvic extremity—the *sensation remains intact*. The functions of the various abdominal viscera continue perfectly normal.

There existed a singular contradiction between the apparent simplicity of the wound, and the paralysis of the corresponding side.

The wounded man no doubt fell, not, as he said, from the shock of the blow, where the weapon would have left the marks, and which, from the direction of the impression, would have thrown him forward and to the left; but by the effect of the immediate resolution of the muscular forces of the right pelvic member. The fall may be thus explained—which was the result, and not the cause, as he persisted to think, of the paralysis.

Diagnosis.—In conformity with that hypothesis, I asserted that the isolated cessation of movement in the right abdominal member, indicated a *lesion of the right anterior cervical portion of the spinal cord*; that, if the thoracic

member was not as completely paralyzed as the pelvic member, this was owing to the wound being situated in the region of the fifth cervical vertebra, leaving above it a part of the origin of the brachial plexus unimpaired; in short, *that, if the respiration on the right side, experienced no remarkable mechanical derangement, it was because the roots of the diaphragmatic nerve had not suffered.* * * *

From the 24th to the 27th, the patient grew worse; the pulse became irregular—the respiration, during the nights of the 26th and 27th, until then free, grew rapid and difficult—hiccough supervened, * * * * dyspnoea progressed, * * * * died the 27th, at eight o'clock A. M.

Autopsy.—Having cut down to the vertebræ, the basis of a broken piece of the blade of a knife was seen protruding a line or so. All of the cervical portion of the column was carefully detached. In stripping the soft parts from its anterior part, for the purpose of seeing it with more ease, the point of the blade was discovered sticking out a line and a half between the sixth and seventh vertebræ, after breaking the superior border of the last mentioned vertebra. The point had also intersected the posterior wall of the pharynx, without going entirely through it. *As to the cervical marrow, it had been reached by the rounded back of the blade which terminates in the point; and the section extended obliquely, from the right side, beginning at the fissure of the origin of the posterior roots of the spinal nerves, as far as the anterior or median fissure, so that all of the right antero-lateral column had been divided.* It could easily be seen on an attentive examination, *that the posterior corresponding column was intact, from the line of origin of the posterior roots, back to the median fissure of the marrow.*

The general direction of the wound was oblique, from above downwards, and from without inwards, as it began at the fifth cervical vertebra, about one inch to the right of the median line (twenty-four millimetres), and terminated at the upper edge of the body of the seventh vertebra, on the right side.

The right hand, forearm and arm completely paralyzed, and the left side of the body, except the upper extremity, rendered insensible, by a sword thrust into the cervical region.

A drummer of the National Guard of Paris, was disputing with one of his drunken comrades, who, not being able to reach him, threw his sword at him, from a considerable distance, just as he had turned to leave. The point took effect in the superior and posterior right lateral side of the neck. The superior right limb lost all movement, whereas the inferior one appeared only slightly weakened. *The sensibility was perfect throughout the right side of the body—a slight difficulty in the respiration was perceptible.* On the fourth day the weakness of the inferior limb had entirely disappeared; the patient could exercise a slight movement in the forearm. On the thirteenth day he had recovered his strength and appetite; he got up and walked—but the paralysis of the upper limb was the same. While amusing himself with one of the nurses, who pinched him, he perceived that *the left side of the body was partially insensible.* He informed me of this next morning. I then remarked the following phenomena: *the whole of the left side of the body possessed its ordinary agility and movements, but the whole extent of the left foot, the leg and the thigh were insensible.* That insensibility was also complete on the left side of the abdomen, and extended to the skin of the scrotum and penis on the same side. A little higher up than the bottom of the chest, to the left, an obtuse sensation began to be perceived, and became more and more manifest on going upwards; so that about the middle of the fourth rib, the

sensibility of the skin was equal to the rest of the body. The right thoracic limb was perfectly natural.

Twenty days after the accident this man went out of the hospital, cured of the wound in the neck; but the arm, the forearm, and the right hand, were completely paralyzed; and the left side of the body, excepting the upper limb, was in the state of insensibility we have just described.

Remarks.—Boyer merely adds, that “*these symptoms would lead us to believe that the spinal marrow had been injured—but superficially.*” But now, thanks to the progress of experimental physiology and observation; to the pathological cases of M. Bégin—so remarkable in the precision of the symptoms, and in the lesions, a diagnosis so undefined is by no means satisfactory. To explain the various effects observed, let us remember, first, that, physiologically speaking, though the spinal marrow resembles the nerves in this particular—that it conveys, as they do, the impressions and the exciting force of motion—yet it ought to be considered as the common fasciculi of all the nerves of the body and limbs.

Right side of the body.—Sensation good; the upper limb cannot perform the slightest movement, and the inferior member is weakened. From thence I conclude, that in the *right* anterior medullary column there existed an incomplete lesion, which affected exclusively the nervous fibres which unite in this bundle all of those of the thoracic member—whereas those of the abdominal had escaped almost entirely.

Left side.—Movement is entirely preserved, and the superior thoracic member is in a situation perfectly natural; but the insensibility that is observed in the whole of the pelvic extremity, extends itself to one-half the penis and of the skin of the scrotum, then mounts as high up as the corresponding part of the thorax. From whence I infer, that there was incomplete destruction of the *left* posterior medullary columns, limited therein, to the fibres that convey the impressions of the abdominal member and the parts of the body just indicated.

In other words, the sharp point of the weapon must have traversed obliquely the spinal marrow, from left to right, and from behind forward, so as to divide incompletely its posterior left column, and its anterior right one.

“Experimentation, observation, and reasoning, will prevent our being looked on as rash, or as having hazarded the diagnosis that we have just established.”

CASE XVI. *Fatal injury to the spinal marrow from a fall.* By J. A. Mayes, M. D., of Sumter District, South Carolina. Southern Med. and Surg. Journal, vol. iii., 1847.

Lafayette, a negro man, aged about twenty-five, of good constitution, and in the enjoyment of excellent health, sustained a severe injury by falling from a tree on the night of the 10th of September. He had been hunting around his master's cornfields for raccoons, and had discovered one in the top of a tree some twenty-five or thirty feet high. The usual mode of taking these animals, practised by the negroes on Black River, is to climb the tree and shake them out, having full confidence that their trusty dogs below will not allow them to escape. This, Lafayette essayed to do, but when about fifteen feet above the ground, he made some false step, which resulted in his being precipitated headlong to the ground. His companions state that he was speechless for nearly half an hour, and as soon as the power of expression returned, he complained of pain in his neck and between his shoulders. He was, however, incapable of voluntary motion, as respects the lower extremities, but could move his head a little—more freely to either side, than either backwards or

forwards. He could also raise his elbows, but his hands and fingers were motionless.

I visited Lafayette about an hour and a half after the accident, and found him in the following condition: His mental faculties in no respect disordered, memory of what had passed perfectly distinct, and gave me the foregoing account himself, differing from that received from his companions only in minuteness of detail; stating that he did not fall directly upon his head, but that the back of his neck and head struck the ground first: complains of pain in the neck, and that only when he was moved; feels no pain when suffered to be still; incapable of any voluntary motion, except the slight movements of his head and elbows before mentioned; surface of the entire body rather cool; pulse full, but slow, fifty-four to the minute—neither dislocations nor fractures could be detected, but some serious injury of the cervical vertebræ and spinal marrow was considered as absolutely certain, though the nature of the injury could not be correctly ascertained.

Being called upon to direct the treatment of this interesting case, I directed counter-irritants to the spine, believing that the only hope of a successful termination consisted in relieving the spinal marrow of the dangers of high inflammatory action, although it was very questionable whether its integrity was preserved. As this latter condition could not be ascertained, I could do no better than to take it for granted, that the spinal marrow had received no lesion, which would, of itself, cause death, but that loss of life might be the result if high inflammatory action should supervene. Counter-irritation, by means of blisters from the occiput to the sacrum, seemed to be preferable to any other treatment; blisters also were applied to the extremities, and not till then did I discover that he was entirely insensible to pain in the lower limbs—although the blisters drew well, he never felt them. After reaction was somewhat established—the pulse being seventy-five to the minute, full but soft—I bled him from the arm about ten ounces, and administered ʒj of castor oil. This was on the day after the accident occurred. The oil did not operate, however, until a second dose of like quantity was administered. The muscles concerned in the expulsion of urine seemed to have been completely paralyzed; the catheter was therefore used twice daily. The secretion of urine was very abundant, and had the appearance and smell of healthy urine until the eighth day after the injury; at which time it became tinged with blood and very fetid, the quantity also was considerably increased; this state of the urine continued till the 10th day, when it became rather thick with mucus to be drawn off by the catheter: he died a few hours after I first observed this state of the urine. His bowels were rather torpid the whole time, but could be moved by large doses of castor oil, that being the only purgative medicine administered. His breathing was very full and easy the whole time. The pulse remained at seventy-five until the eighth day, when it rose to ninety, soft, but with less volume—the ninth day it was 110, very feeble and for many hours before death it was exceedingly quick, but too indistinct to be accurately counted. He had no appetite, but seldom refused nourishment when brought to him. From the eighth day he belched a great deal of fluid from his stomach, and this belching had increased so much on the tenth day, that it was almost an incessant flow. He had hiccough occasionally on the day of his death. His intellect remained unclouded and he frequently spoke of approaching death with calmness. On the night of the 20th Sept., just ten days after the injury was received, he was relieved of his sufferings, by death; no doubt a welcome relief.

In reference to the treatment of this case, I should have but little to say; but as some may, in such cases, prefer cupping to blistering the spine, it is

proper that I should give my reason for preferring the latter. Cupping relieves by local abstraction of blood, and does not exert any influence upon the system generally; whereas, a blister relieves by local depletion and at the same time exercises an important stimulating influence over the whole animal economy; a matter of great moment in a case like the present. If my views on this point are incorrect, I hope some one will take the trouble to correct them; as my object in reporting this case, is not to attempt to enlighten the profession, but simply to announce the fact that I am in want of information—good *practical information*—on the treatment of injuries of the Spinal Marrow.

Autopsy seven hours after death.—The autopsy in this case did not embrace a particular examination of all the organs, as the lungs, kidneys and brain exhibited no evidences of injury during life. Want of time compelled me to make the examination as short as possible. The cervical vertebrae were exposed and found to be injured in two places. The atlas and dentata were entirely separated; the atlas remaining firmly fixed in its position. The spinal marrow did not appear injured at all at this point. This fracture (as it may well be called a fracture) was complete, the separation being entire. The fifth and sixth vertebrae were also partially separated, and at this point there was manifest injury of the medulla. As soon as the muscular coverings of the bones were cut through, the marrow gushed out, similar to the escape of purulent matter from an abscess, when opened with a lancet. The medulla spinalis, at this point, was evidently in a state of decomposition. How more injury had happened to the medulla at this point, where the bones were still adhering in front, than at the other, where the separation was entire, appears to me inexplicable.

The internal organs were very cursorily examined. Evidences of peritoneal inflammation were plainly to be seen, though its existence was not suspected during life. The bladder was nearly black, and had formed strong adhesions to the surrounding viscera on all sides; distended with urine. The stomach was also distended with fluid.

The result of this examination was a conviction that in consequence of the injury of the medulla spinalis, no treatment would have done any good; death would have been the ultimate result. The peritoneal inflammation, no doubt, hastened its approach.

CASE XVII. *Extensive fracture of the spine, with complete division of the cord—life continuing two months.* American Journal Med. Sciences, vol. xxv., 1853.

Dr. Parkman presented the specimen for the Society's cabinet. The principal fracture was through the body of the fifth dorsal vertebra, and, the bodies of the third and fourth being separated from their laminae, were shot in front of the sixth and seventh. The displaced bones were firmly ossified in their new situations. The specimen was sawed through perpendicularly, and the division of the cord was seen to be complete. The symptoms were those common to these cases. The point of interest was the long continuance of life under these circumstances. Dr. P. stated that death usually occurs before the expiration of the fourth week.

CASE XVIII. *Division of the spinal marrow; recovery of patient five years afterwards.* By Eli Hurd, M. D., of Middleport, New York. New York Journal Med., 1845.

On the 24th of April, 1829, J. S. Spalding, of Hartland, N. Y., jumped from the top of a lumber wagon box on to a stick of timber lying upon the ground; and as his feet struck the timber, the surface being wet, they slipped

instantly from under him, and he fell upon his back and left side. When he came to a rest, he found himself partly under the wagon, and between the wheels, the wagon and timber being parallel to each other. From this position he endeavored to extricate himself, but found his lower extremities benumbed and powerless. He then called out for assistance, saying that he had broken his back on the edge of the timber in his fall. He was immediately extricated from his perilous situation, and informed by his assistants that there was a chisel sticking in his back. This chisel, when he jumped from the wagon, was in his coat pocket. An attempt was promptly made to extract the instrument, which resulted in pulling off the handle only.

I was then called, and in a few moments was on the spot, where I found my patient in the arms of three or four men, his back exposed, and an iron tool, which proved to be a part of the shank of a chisel, projecting from the skin. This I seized with a pair of blacksmith's pincers, such as are used for pulling off horseshoes, and braeing myself, endeavored to extract it, instead of which I pulled him out of the hands of those who had hold of him. We then braced ourselves once more, and after a prolonged and severe effort, succeeded in drawing out a chisel, *five inches in length to the shoulder*, seven-eighths of an inch wide, and from a quarter of an inch at the shoulder tapering to less than one-eighth of an inch in thickness at the cutting extremity.

The wound was then dressed, and the patient carefully conveyed home. At the time of extracting the instrument, he says that he saw "vivid flashes of light, which were apparently followed by total darkness." During the operation he was conscious of very little pain.

The wound made by the chisel was opposite the spinous process of the lower dorsal vertebra, on the left side. At its superior extremity it was half an inch from the spinous process, and one inch at its inferior extremity; so that a line drawn parallel to the spinous process of the vertebra, and three-fourths of an inch to the left, would have intersected it in the middle. The direction of the instrument was upwards, at an angle from the surface of twenty to twenty-five degrees, and to the right of about twelve degrees, penetrating the spinal column, and undoubtedly entirely dividing the cord. Perfect insensibility of the skin below the wound, with paralysis of the lower extremities, bladder and rectum, was the immediate consequence. The shock that the system received produced great prostration for some forty hours, when reaction took place, and was followed by fever for ten or twelve days. The external wound cicatrized in a few days, scarcely discharging a spoonful of pus. The urine was drawn off by means of the catheter for six days after the accident, when the bladder began to resume its functions, and two days after the instrument was discontinued. Cathartics failing to move the bowels during the same period of time, and for two or three days longer, dejections were procured by stimulating enemata. Returning sensibility occurred in the skin the fifth day, and an imperfect use of the limbs about the fifteenth.

My attendance was twice and thrice daily for the first six days, once daily for the next eleven, then occasionally until the twenty-first after the accident (May 15), when the patient was dismissed from my charge. He first commenced locomotion on his hands and knees, then by pushing a chair round, and afterwards by means of crutches, which he has been obliged to use ever since. Distortion of the feet and ankles commenced some weeks after his efforts to get about on crutches, and increased for several years thereafter; yet his general health continued good.

The treatment during the state of prostration was by diffusible stimulants, through the febrile stage by antiphlogistics; while friction, with stimulating

liniments to the paralyzed parts, was used throughout both stages, and for months afterwards.

The following additional particulars, written subsequently and recently communicated, complete the history of this remarkable case.

Sensibility in the skin and action in the inferior extremities returned very slowly; so much so, that four years and seven months after the accident above-mentioned, carelessly sitting or kneeling with his left knee nearer than usual to the hot fire, without feeling any pain, or being conscious of suffering, the skin and integuments over the knee-pan and on either side of it were so badly burned that mortification and sloughing took place. This was so deep, that the cavity of the joint was opened and exposed to view. The patella was covered only by the periosteum, and after a few days, as he was endeavoring to draw his leg up in bed, broke transversely across. The superior portion of the patella protruded so much from the wound in consequence of the retraction of the extensor muscles, that, after various unsuccessful attempts to reduce and keep it in place, it was removed by amputation. The knee was now much inflamed and swollen. The wound gaped horribly, and every symptom gave indication of a fatal issue. A fungous vegetation sprang up from every side of the wound, filled up the cavity, and formed a spongy protuberant mass above and around it. Hemorrhage followed every application of caustic that was made to check its exuberant growth, as well as compression, even the slightest touch. The miserable patient became extremely exhausted, and amputation of the diseased and crippled limb seemed the only alternative, and even that a doubtful one.

At this juncture, December 23, 1833, which was more than three weeks from the time of the burn, and the seventh of my attendance, I commenced dressing the wound with "*Singleton's Golden Ointment*," according to the analysis of Mr. Thomas Clark, of Glasgow, Scotland. This soon arrested the morbid action, reduced the size of the fungoid mass, and gave it a healthy appearance. Convalescence slowly followed. January 22, 1834, I introduced a seton in the sound parts above the wound, and on February 4th the patient was dismissed cured. He has since remained well. No ankylosis of the joint at the time occurred, nor has since taken place. On the contrary, he has complained of its being rather too flexible.

A large, ugly-looking puckered cicatrix remains over and above the left portion of the joint. The inferior portion of the patella is drawn round upon the outside of the knee-joint. The leg is rotated outwards, and the heel thrown in so as to point to the hollow of the right foot. The toes are thrown out and drawn up towards the metatarsal bones, and the whole foot is drawn inwards, and flexed upon the tibia in such a manner as to make almost a right angle with the leg. There is also considerable deformity of the right foot and ankle, though less than of the left.

The general treatment was by wine, tonics, and opiates. The local, unimportant otherwise than as above mentioned. He was under my care, in the treatment of the limb, for thirty-three days, and slowly thereafter recovered the use of his limbs, except the previous decrepitude, which has considerably increased since.

Such is a brief account of this extraordinary case; embracing and detailing, however, all the important and material facts that transpired both with regard to disease and treatment, from the time of its first unfortunate occurrence till its final termination in health.

There is no curvature of the spine, nor has there been at any time. Nor is there any complaint whatever of the back. He can get into and out of a carriage, mount a horse from the ground without assistance, and ride off at

any pace. He has been elected constable and collector of the town where he resides for a number of successive years, discharged the duties of his office acceptably to the public, and attends to many other kinds of business. He has married within two years, and has one child. In fact, he is, in every sense of the word, as *well* as he ever was, except his crippled condition.

We regard the above case as unique, as far as our knowledge extends, and the facts are abundantly corroborated. That the spinal marrow was completely divided, and afterwards united, there seems to be no doubt whatever. Perhaps it may be deemed not more remarkable than the union of nerves after division for tie douloureux, a fact well authenticated, as the spinal cord may be considered no more than a bundle of nerves contained within a common sheath. Cases also are recorded where incised wounds of the brain have united, and the patient recovered; but, so far as we are informed, this is the first instance on record of a total division of the spinal cord.

CASE XIX. *Electro-puncturation of the spinal marrow.* By the late celebrated Parisian Surgeon, M. Roux. *Lancet*, 1827, vol. xiii.

Electro-puncturation has been used with great success at the Charité by M. Roux. A young person, eighteen years old, had been the subject of a tumor of the vertebral column for two years, which had brought on complete loss of feeling and motion in the lower extremities. When she was on the point of leaving the hospital, after having remained there for some months without any prospect of relief, M. Roux performed electro-puncturation, by directing in the course of the spinal marrow the galvanic fluid, by means of a very long needle introduced into the spinal marrow across the bodies of the vertebrae, and which was then placed in contact with the Voltaic piles. The patient almost immediately experienced a sensation of tickling at the extremity of the toes, and soon recovered the power of moving them in a slight degree; this power extended successively to the fingers and to the legs, so as to allow the patient to walk without crutches.

CASE XX. *Tumor in the cauda equina.* By W. W. Fisher, M. D., of Cambridge, England. *British and Foreign Med.-Chir. Review*, 1842, vol. xxxvii.

Taylor, a tailor, aged 38, intemperate, first seen January, 1840. In 1837, he injured, whilst riding, the lower part of the loins by the back part of the saddle, and from that period he began to suffer from pain in the lumbar and sacral regions, which was attributed to rheumatism; the pain gradually became more violent, and extended down the legs, which began to swell. He was obliged to give up work in June, 1839, and became bed ridden in the September of the same year; he could not, however, lie down, but rested on his hands and knees. He was then unable to move either his loins or lower extremities; but he had the free use of neck, shoulders, and arms. The pain, which had formerly been chiefly confined to the region of the sacrum, was now more particularly felt across the seat, extending from one ischium to the other. There was great numbness throughout the lower extremities; and although no sensation was in the left leg or toes by touch, nevertheless he complained strongly of a feeling of heat in the parts. There was some degree of feeling, on touch, left in the right leg. The legs were very cedematous; there were large ulcerations on those parts of the knees on which he rested, yet he did not experience pain from them. He was generally sleepless, but did not suffer from headache; his breathing was easy, his pulse undisturbed, and his appetite good. He had difficulty in making water; and his bowels were generally confined, and at times so obstinately constipated as to resist the action

of cathartics and purgative injections. An issue had been placed on the region of the sacrum, the discharge from which was thin; this was rendered of a more purulent character by the use of iron, from which he seemed to derive more benefit than from any other medicament, especially as regarded the making of water. He died in May.

Examination.—Back only inspected. The sacrum seemed more protuberant than usual; this appearance, however, arose from the loins being more depressed. The arches of the dorsal and lumbar vertebræ and the posterior wall of the sacrum were removed; the laminæ of the lumbar vertebræ, as well as their bodies, were partially affected with caries.

Viewed posteriorly, the dura mater appeared to be in its natural state until it reached the extremity of the spinal cord; but from that point to the end of the sacrum it was wanting, so that the mass of tumors was exposed to view. The morbid growth extended more towards the left than the right side of that portion of the spinal canal in which it was situated. The spinal cord was cut across, about the middle of the back, and the inferior portion of it was removed; nearly the whole of the diseased mass came along with it. The cord appeared to be quite sound throughout. The diseased mass had a lobulated form, and was involved in the cauda equina; and although it was traversed by a few of the nerves, nevertheless the greater portion of the latter could be detached from it.

It was difficult to determine the seat of the tumor when examined posteriorly; but anteriorly the dura mater was sound throughout; and the arachnoid membrane, especially at the upper portion of the tumor, could be traced intact between the latter and the dura mater. Here and there proecesses were observed to pass from the arachnoid to the diseased structure, but they were similar to those met with between the arachnoid and the pia mater in their natural state. The morbid growth presented several traces of vascularity in the centre, and had a scirrhus appearance. The upper portions of the tumor were softer, and were involved in a fine glistening covering; sections of several portions of them showed them to be composed of a gray, semi-transparent, jelly-like substance, infiltrated amidst reticulated tissue, and marked with sanguineous striæ, several of which appeared like true vessels.

Dr. Fisher thinks there can be little doubt that the disease was seated in the pia mater.

CHAPTER III.

THE FACE.

SECTION I.

INJURY OF THE EYE.

CASE I. Melted lead in the eye; sight preserved. By J. H. Clark, M. D., of Newark. New Jersey Med. Reporter, 1852.

Was called, March 24th, 1847, to P. C., a plumber, aged 40, into whose eye a quantity of melted lead had been directly thrown. A portion of the metal had penetrated between the lids in a fused state, and moulded itself to the ball of one of the eyes, covering nearly the entire surface; the lids also were much burned. A half hour had elapsed from the time of the accident,

before I saw him. I immediately removed the lead, which was moulded not only upon the eye, but upon the brow and lids. I took out a piece which presented a precise mould of the cornea, and expected of course to find considerable injury, but to my surprise, owing to the profuse lachrymal secretion, and the rapid cooling of the metal, merely a severely conjunctival inflammation ensued. Employed promptly antiphlogistic measures to relieve the inflammation.

25th. Patient much better; sight uninjured; lids much swollen; conjunctival vessels highly enlarged; no inflammation of any other tunic; no constitutional fever. By the means of occasional cupping, low diet, rest and darkness, Mr. C. was again at his shop upon the 31st, sufficiently recovered to pursue his ordinary avocation.

When I met with this case I supposed it to be without parallel, but I found that Mr. Lawrence, at page 177 of *Hays' Lawrence*, thus relates the following as the only case that ever fell under his observation: "I had a patient at St. Bartholomew's in whom melted lead had passed into the eye. A thin concave portion of the metal was removed, which obviously owed its figure to having been in contact, while liquid, with the eyeball. The organ sustained no material injury." My friend, Dr. David Greene, of New York, has since related to me a case in his own practice, where molten iron was borne with almost equal impunity.

CASE II. *Larvæ developed beneath the palpebræ.* Lancet, 1843.

A case is recorded in the *Med. Zeitung*, in which a serious inflammation of the membrana conjunctiva resulted from a deposition of the eggs and development of the larvæ of the common house-fly within the eyelids. The subject was a child, three years of age, who had felt much pain in the left eye for a lapse of eight-and-forty hours, at the end of which time the upper eyelid was found so much inflamed as to cover nearly the whole of the lower; and on everting it, a layer of worms was found to cover the whole surface of the eye, and to form a dense mass in the internal angle of the eyelids, and in the lachrymal fossa. By the help of a pair of tweezers, twenty of these interlopers were extracted, each being about half an inch (twelve millimetres) in length. The cornea had been rendered opaque, and of a greenish-blue tint. The conjunctiva of the opposite side was also inflamed and ulcerated; no larvæ were discovered upon its surface, but one was met with deeply imbedded in the lachrymal fossa, and extracted piecemeal with difficulty. It is supposed that a fly, attracted by a slight ulceration at the internal angle of the left eye, must, while the child slept, have deposited its eggs there, which, by subsequent rubbing on the part of the patient, had been forced under the eyelids. The right eye was soon restored to health, but the left remained much longer affected, and some opaque spots in the cornea persisted for a considerable period afterwards.

CASE III. *Sight destroyed by a shot rebounding from water.* Dupuytren on Wounds. Jour. North American Archives of Med. and Surg. Science.

Two boys were firing at fish, upon opposite sides of the river, their guns being loaded with shot. One of them perceiving a fish, fired at it—at the same moment his friend, placed on the other side of the river, was struck in the eye by a shot. A small wound was perceived on the inferior eyelid, and an opening upon the globe of the eye, near the union of the transparent cornea with the sclerotic. The sight of the eye was lost—violent inflammation took place, and only terminated by the bursting of the organ, and evacuation of the humors.

CASE IV. *Successful extraction of a piece of metal from the eye.* By Thomas D. Mütter, M. D., late Professor of Surgery in the Jefferson Med. College. *American Journal Med. Sciences*, 1833.

The patient, S. Thomas, a stonecutter by trade, whilst employed in his vocation, was struck in the left eye by a spark given off from the steel instrument with which he worked. The spark entered the cornea, nearly at its centre, and passing entirely through it, lodged in the anterior chamber of the eye, where it could be distinctly seen, occupying a position in the inferior part of this cavity. When I saw the patient, fifteen hours after the occurrence of the accident, a good deal of inflammation had already taken place. An injected conjunctiva, a continual epiphora, and a sensation of smarting or burning referred to the entire ball of the eye, were the accompanying symptoms. The opening in the cornea, about half a line in length, seemed to be valvular, the spark having penetrated from below upwards, and its edges were smooth and regular, as if made with the point of a lancet. In consequence of the opening being valvular, but a small portion of the aqueous humor had escaped.

It appeared to me important, that an immediate extraction of the foreign substance should be accomplished, and the operation which seemed most simple, and at the same time best calculated to effect this purpose, was the section of the cornea, which I accordingly determined to perform. The patient was placed in the position recommended in the operation for extraction of cataract, a strong light thrown upon the eye, and a flap composed of the cornea raised up with the lancet-shaped knife of Ware. A portion of metallic matter about the size of a mustard-seed flattened, was then readily extracted with the forceps. The flap of the cornea was then adjusted, the lids closed, and a bandage lightly applied over the eye. As there existed a considerable degree of inflammation already, and to guard against a future aggravation of it, a blister behind the left ear, leeches to the temples, low diet, and a pretty active dose of the sulph. magnesia were prescribed. The patient recovered in a short time. It is an every-day occurrence, among stonecutters, for these small particles of steel to be driven into the sclerotica or cornea, where they produce more or less inflammation, if not immediately removed, but it is not so usual for them to penetrate entirely through the cornea, and lodge in the anterior chamber.

CASE V. *Extraction of a piece of percussion-cap from the iris; sight preserved.*

This case was a son of the Hon. Mr. Rives, Representative of Virginia, and occurred in Washington City, in 1838; is published in detail by the late Prof. Sewall, of that city, in the *American Journal of Med. Sciences*, and was operated upon by the distinguished surgeon, Prof. Nathan R. Smith, of Baltimore. By the explosion of a percussion-cap a portion of it was driven through the cornea and imbedded in the iris. Forty-two hours after the injury the foreign body was removed by a pair of delicate forceps, through an incision made into the anterior chamber of the eye.

By the most judicious antiphlogistic treatment rigidly carried out by the mother of the child, who himself proved to be quite a man and refused to be held during the performance of the severe operation, sight was preserved even under these desperate circumstances. We believe this to be the only instance of the kind: in all others of a similar nature, that we know of, sight has been lost.

CASE VI. *A shot in the optic nerve.* By John Butter, M. D., F. R. S. Physician to the Plymouth Eye Infirmary. *Pattison's Med. Register*, vol. i., 1834.

Mr. H——, aged fifty, came from Camborne, in Cornwall, and first consulted me at Plymouth, in Sept., 1830, on account of total blindness in his left eye, accompanied with very great pain occasionally, and considerable amaurotic affection (photopsia) of his right eye. He gave the following history: On the 19th February, 1827, while shooting, a gun was fired at a woodcock by another person, and a shot lodged in his left eyeball, producing instant blindness. For a fortnight afterwards he did not suffer greatly; but during the last four and a half years the pain would flash so suddenly and intensely, at times, through his left eye and head, and so seriously disturb the visual functions of his sound or right eye, that in whatever occupation he was engaged, his sufferings obliged him to desist for a time, to apply leeches, and to resort to other remedial measures. The fear of losing also the sight of his sound eye from sympathy, added to the actual pain felt in the left, induced him to seek, and even to urge, the extraction, if possible, of the shot, which he knew from his acute feelings must be seated in some very sensitive part of his left eye.

The following appearances were exhibited: His left eye was rather less in size than his right, but free entirely from inflammation. On the nasal side of the eyeball a fistulous opening was perceived through the reflected conjunctiva and sclerotica, nearer to the iris and cornea than the spot at which we usually introduce the needle in depression. I could pass a fine gold probe through this opening, nearly into the posterior chamber; it was evidently the entrance of the shot. The iris was not materially altered. A cataract behind it could be distinctly seen.

In a consultation with my colleague, the late Mr. J. H. Luscombe, one of the surgeons to the Plymouth Eye Infirmary, we agreed at first to dissuade Mr. H. against an operation, or any attempt to search for a shot, the position of which was extremely doubtful and uncertain; but it was the wish of our patient that some trial should be made.

On the 9th September, 1831, aided by Mr. Luscombe, and Mr. Lanyon, Jr., a very promising young surgeon from Camborne, and Mr. H.'s medical attendant, I extracted the cataract, which consisted of calcareous matter and spicula of bone. I afterwards syringed out some gritty matter from its bed. We all hoped that the removal of this bony lens might have been followed with corresponding relief, thinking that the ciliary processes had been irritated by its pressure and hardness, in such a manner as to account for the principal symptoms. In this hope and expectation we were disappointed; for on 23d February, 1833, Mr. H. came back to Plymouth, having returned from hence to his home on 6th October, 1831 (twenty-seven days after the first operation), and requested me to make a further attempt for the removal of the shot, which his feelings denoted still remained within his eye, and caused those sympathetic sensations (amaurosis) in his right eye, the sight of which being now endangered, he was most anxious to preserve. He pointed to a bluish and prominent part of his left eye, underneath which he considered that the shot must be lodged. Indeed, this idea seemed very probable to myself, and to my brother, a surgeon at Sympstone, then on a visit here, who assisted me in hooking up this prominent portion of the sclerotica, which I excised with the scissors, and made an aperture sufficiently large to enable me to explore with the probe the internal concavity of the eye, and to allow the exit of the vitreous humor. Still no shot was found. It is needless to say, that this second operation disappointed us all; but Mr. H. determined to have his whole eye

extirpated at a future period, should not his complaints be alleviated by the suppuration which followed this other attempt.

At his request, on 23d September, 1833, I removed the whole of his left eyeball, with its lachrymal gland, and divided the optic nerve far back in its socket, close to the foramen opticum, fearing that I might still miss the object of our pursuit. On dissection afterwards, I had the greatest satisfaction to find a duck-shot, impacted so firmly in that part of the optic nerve which expands and forms the retina, that a considerable effort was required to detach it from its bed, in which it must have been fixed *for six years and six months*, closely embraced by the nerve. Such was the patient's extreme fortitude and perseverance, that not even was his hand raised, nor a syllable of complaint uttered, during this most painful operation, in which I was very kindly assisted by Drs. E. Moore and Rendle, the present surgeons of the Plymouth Eye Infirmary, and also by Mr. Square, a very intelligent pupil of the same. The preparation of the shot, *in situ*, I have preserved for my own collection.

At the end of a fortnight the patient was nearly well; but for three weeks afterwards he was detained by adhesions which formed between the lids and subjacent parts, and which I repeatedly divided. Some morbid sensations were felt in the ophthalmic branch of the fifth pair of nerves, and also in the ramifications of the superior maxillary, resembling *tic douloureux*, which I trust the carbonate of iron, taken in large doses, and vinum opii applied externally, will effectually remove. Mr. H. returned from Plymouth to Cambridge on the 9th November, 1833 (about forty-seven days after the third operation). In his last letter he writes that the strength of his right eye increases daily, and that the neuralgic complaints in his face also decrease. A glass eye has been fixed in, to correspond with the other; but the parts are too tender yet to bear it.

The shot was very little altered in its form—a little indented with a sharp point or two; its extraordinarily firm attachment was surprising; there appeared to have been no suppuration, nor disposition to ulceration; and the shot must have entered the sclerotica near its junction with the cornea, on the nasal side, passed beside the crystalline, and through the vitreous humor, to the optic nerve, where it perforates the choroid coat.

CASE VII. *The ivory handle of an umbrella in the orbit of the eye for three years.* By Elkanah Williams, M. D., of Cincinnati, Ohio. *Western Journal of Medicine and Surgery*, 1853.

A man, aged 30, was struck in the eye three years ago with the *handle of an umbrella*, and rendered for some minutes unconscious from the force of the blow. He affirms positively that he saw distinctly the shaft of the umbrella, mounted by an *ivory handle*, after the accident, and it was *not broken or shivered in the slightest degree*. He was examined by a surgeon, who found considerable contusion, and a wound at the inferior internal part of the orbit, but suspected nothing else. The acute inflammation, swelling and cecchymosis disappeared after a few days, still the wound did not completely heal, and he suffered severe pain round the orbit, and in the corresponding temple. Six months afterwards, the fistula and circumorbital pains continuing, he applied to the celebrated oculist, M. Desmarres, who sounded carefully the fistula and felt a hard substance at the bottom of it, which he supposed to be either a sequestrum of bone or a foreign body. He enlarged the fistula with a bistoury, and tried to extract it, but without success. Some eighteen months after this tentative, he again applied to the same surgeon, who made a free incision in the direction of the fistula, and seized the hard body with a pair of forceps, but they slipped at each application, and brought away in the jaws a

little crushed bony substance. He afterwards consulted several surgeons and physicians, who considered it *fistula lachrymalis*. On the 13th June, 1853, over three years after the accident, he entered the hospital. At first view, the man presented all the appearances of *fistula lachrymalis*, but, on close examination, M. Nélaton found that the lachrymal canals and nasal duct were perfectly free from obstruction. There remained a slight cicatrix and a small fistulous opening at the inferior and internal parts of the orbit, *external*, however, to the lachrymal sac. On passing a probe into the fistula, it was found to extend into the orbit, backwards and inwards, and at the bottom was felt a very hard, smooth body, which gave the sensation of denuded bone. Influenced somewhat by the patient's positive declaration that he saw the ivory-mounted umbrella handle after the accident, entire, M. Nélaton concluded that it must be an *undetached* or else an *impacted* sequestrum. In order to remove it, he passed a grooved director to the bottom of the fistula, and made a free incision with a bistoury. Then with a pair of forceps he seized and extracted the *entire ivory handle* of an umbrella, *two inches in length and three-quarters of an inch in diameter*, to the perfect astonishment of surgeon, patient, and all the bystanders. After the extraction of the foreign body, the patient, by blowing the nose, could make the air pass out through the opening, showing that the end of the handle had broken through the thin internal wall of the orbit into the nostril.

Previous to the operation the patient was *unable to see a particle* with the eye, although he could distinguish light from darkness. The eyeball was a little prominent, and there was *external strabismus*, so that he could not turn the eye inwards beyond the median line. In all other directions the ball moved with perfect freedom.

The operation was performed June 13, and the slight inflammation which resulted soon disappeared. On the 20th, he could move the eyeball freely in all directions, and began to distinguish objects. The 26th he left the hospital cured, with the *sight perfectly restored*.

A few weeks ago I saw a case at Hospital Cochin, which bears upon this same point. The man said he received a blow in the cheek from a *sabre* during the revolution of 1848, and that there had, ever since, remained a fistula. Just at the lower edge of the malar bone, and at its anterior part, was a deep depression, with a fistula in the centre, producing great deformity. At this point, also, there was firm adhesion of the soft parts of the cheek to the superior maxillary bone. In dissecting up the adhesion, M. Maisonneuve found *three flattened musket-balls, of large size*, lodged against the bone. From a mistaken diagnosis, based on the patient's word, that the wound was produced by a *sabre*, an eminent surgeon had, at different times, extracted several of his teeth, on the supposition that the fistula was kept up by a carious fang.

CASE VIII. *Extraction of a musket-ball lodged in the orbit twenty-four years.* By J. Briscioni de Brosa, of Verona, Italy. British and Foreign Med.-Chir. Review, 1846.

Felice, an old soldier of one of Napoleon's armies, was, during an engagement, struck just above the left orbit by a musket-ball, but as a comrade fell dead at the same time at his side, he believed the ball had rebounded from the orbit and killed him. For more than 24 years after, he was continually the subject of violent pains in the left eye and to attacks of cephalalgia—the eye itself projecting much from the orbit. The numerous surgeons under whose care he placed himself from time to time, believing his tale of the rebounding of the ball, afforded him little or no relief, and in 1837, he came to

the hospital at Verona. The author, upon examining the case, came to the conclusion that the projection of the eye could only be caused by the persistence of the foreign body in the orbit, for any exfoliation of bone which the blow might have caused would, in the course of so many years (the projection commencing soon after the accident), have been discharged or removed by absorption. A portion of bone was therefore at once removed from the orbit by the trephine. The track of the ball was found ossified, excepting at a small aperture, whence issued from time to time a little fluid. After the bone was removed, the ball was felt by means of a probe at the back of the orbit and removed by means of a forceps. The eye now retreated into the orbit, and after some weeks passed into a state of atrophy. The violent pains were quite relieved, and the patient died five years afterwards only, of pleuro-pneumonia. On examination, it was found that the cranial cavity had not been penetrated by the trephine, but opposite to where the bone had been removed was a deposit of osseous substance.

CASE IX. *The eye ruptured by a fall; yet vision preserved.* Lancet, 1830, vol. xviii.

This remarkable case is extracted from Larrey's *Clinique Chirurgicale* :—

P. Pecheur, of the 5th Regiment of the Royal Guard, fell on the morning of the 20th of March, 1821, against a pile of muskets, and struck his left eye against one of the locks; the globe immediately burst and was almost entirely emptied; the man mechanically carried his hand toward the eye, and found in it some glairy matter, in the middle of which was a whitish globular body, which, according to all appearances, was the lens. He washed his eye with cold water, covered it with a bandage, and was carried to the hospital a few hours after the accident. On examination, I found the eyelids ecchymosed, the conjunctiva red and swelled, and the globe collapsed; there was a wound at the inferior half of the cornea, through which the iris was prolapsed, and from which there was a constant discharge of an albuminous fluid mixed with blood; the bottom of the eye was of a dark red color. The patient complained of violent pain in the orbit, and the whole left side of the head. The eye was washed with cold water; the iris, the internal margin of which was torn from the ciliary ligament, was reduced with a golden stilet; the edges of the wound in the cornea were brought into contact, the eye kept closed, scarifications made in the eyelids, and blood taken from the temporal artery. The patient was placed in a dark room, took cooling draughts, and had ice applied over the head, and sinapisms to the feet. Under this treatment, the pain in the orbit and the headache subsided, and he had about an hour's rest. Towards the evening he became feverish, and was again freely bled. The ice and cooling potions were continued. On the next morning, symptoms of cerebral inflammation having manifested themselves, he was cupped between the shoulders; the other remedies were continued, and the bandage not removed before the ninth day, when I found, to my great surprise, the globe almost of its natural size. The aqueous humor still escaped through the wound, on the edges of which there were some irregular membranous fragments, probably of the membrane of the aqueous humor, which were removed by the scissors. The patient said he could distinguish the light. The eye was again closed, and covered with a compress, dipped in camphorated wine, and an aromatic poultice applied to the left temple and supraorbital region. The other remedies, as well as the application of ice, were continued, and the patient repeatedly cupped. On the sixteenth day, the bandage over the eye was again removed; the pupil was irregular, the iris motionless at the inner and lower portion; but its external half contracted perfectly well; its interior margin

presented a semilunar fissure of a line and a half in breadth. The patient said he could distinguish objects very well, though they appeared to him as if divided longitudinally. The eye was now again covered with a simple bandage, and daily washed with a decoction of poppy-heads, containing a small quantity of camphorated wine. Under this treatment the inflammatory symptoms gradually disappeared. On the twentieth day after the accident, the wound in the cornea began to cicatrize, and, after a few days more, was perfectly healed. From this period the globe recovered its former size and form; the pupil was drawn towards the temple, but perfectly sensible at its outer portion. Sight was completely restored, except that the patient was obliged to use concave glasses, and that when he looked at objects before him, they appeared to him to be divided. On the 15th of May he left the hospital to resume his duties as sergeant, and on the 29th of the same month, he was presented to the Société Philomatique.

CASE X. *Dislocation of the eye.* By Dr. Jameson. Dublin Med. Press—New Orleans Med. and Surg. Journal, 1853.

Peter Nowlan, aged 30, a powerfully able and muscular man, a corn porter, was admitted into Mercer's Hospital on the 3d of November last, at half past twelve o'clock at night. His wife informed me that he came home that evening at ten o'clock, in a most intoxicated condition, and while staggering about his room, he struck his right eye against a small iron hook or nail that was in a dresser, which entered at the outer angle of the upper eyelid of that side, and when she went to his assistance discovered his eye protruded from its socket. She was most anxious to remove him at once to the hospital, but could not succeed in prevailing on him to go until half past twelve at night, when in a few minutes after this I saw him.

He was very boisterous and unruly, had a large check apron held close up to his eye, which he kept constantly rubbing and pressing against it. On its being removed, he presented a most peculiar, and I might add, frightful appearance. There was the right eye protruded out of the orbit, firmly fixed and immovable, staring, elastic to the touch, and devoid of all power of vision. The cornea was dry, cloudy, and rather opaque, pupil moderately contracted, and uninfluenced by the light of a candle. There was no extravasation of blood, nor was there any vascularity of the conjunctiva, although its reflexion from the upper lid on the globe of the eye was partially torn through. The inferior margin of the upper lid was not visible, as it was placed behind the globe and spasmodically closed.

With difficulty I could get him restrained, as he was such a powerful man, but having accomplished it, I then, with two fingers of my left hand, elevated the upper lid, at the same time, with the finger and thumb of my right, pressed the ball of the eye, and immediately it was drawn back with a distinct snap, and the lids closed over its anterior surface. I now, for the first time, observed the small wound before alluded to, at the outer angle of the upper lid, but could not ascertain or form any conjecture at the time what amount of injury he might otherwise have sustained. I therefore had him conveyed to bed, and directed cold water to be assiduously applied to the part for the remainder of the night.

4th. The following morning, at visiting hour, we found him sober, but he did not recollect much of what had occurred. His eyelids were a little swollen; there was some slight vascularity of the conjunctiva; the cornea was clear, shining, and moist, and the tears ran down the cheek; he could distinguish the daylight; complained of pain in the head, and a deep pain in the globe of the eye, with full pulse. He was ordered to have sixteen ounces of

blood taken from his arm, bowels to be freely opened, and cold water to be continued to the part.

5th. Lids less tumid; pain and vascularity of conjunctiva almost gone; complains of the sensation as if gravel were between the lids; vision improved, but sees objects imperfectly, as through a thick haze. Ordered the tart. ant. mist., low diet, and the application of cold water to be continued to the part.

6th. All pain gone; conjunctival vascularity less; sensation as if gravel were beneath the lids gone; vision nearly restored; has completer power over all the motions of the eye. Continue all.

7th. Convalescent; no suffusion; no pain; vision complete.

9th. Discharged cured.

CASE XI. *Dislocation of the eye through the ring of a key.* By Dr. Verkaeghe, in the *Annales d'Oculistique—Lancet*, 1851.

A fisherman of Ostend, returning home in a state of complete inebriety, fell against the key of his door. The ring of this key had become sharp by long usage, and cut the upper lid clean through from above downwards. Entering afterwards the orbit, it acted like a scoop, separated the eye from all the parts which attach it to its orbital situation, and regularly extirpated it, so that the organ went rolling on the floor. Strange to relate, the man was so intoxicated that he did not heed this frightful wound, and went to bed. His wife, on rising the next morning, was much surprised to find that her husband had lost so much blood, and horrified at seeing the eye on the floor. The man was taken to the hospital, where the parts (a few shreds of conjunctiva, and of the recti muscles) were cicatrized and adhered completely.

CASE XII. *Dislocation of the crystalline lens beneath the conjunctiva.* By Charles A. Pope, M. D., Prof. of Surgery in St. Louis Med. Col. *St. Louis Med. and Surg. Journal*, 1850.

William D., aged 33, a robust laborer, whilst fighting in the dark, received a blow with the loaded head of a cane, on the outer margin of the right orbit, and adjacent portion of the globe of the eye. He staggered and fell, receiving from the hands of his assailant no further injury. On entering the wards of the City Hospital, two days subsequently, he presented a general febrile reaction with much cephalalgia, whilst the lids and contents of the orbit were enormously swollen, the ball of the eye seeming to protrude from its socket, and ready to burst from over-distension. General and local bleeding was ordered, together with purgatives and cold applications to the part. The chemosis, which was very considerable, was treated also by free scarifications. After some twelve days, the parts had so far recovered their normal proportions as to permit a more satisfactory exploration of the pupil. This was found greatly obscured by the bloody water which filled the anterior chamber. The chemosis now existed only in the equator of the eye, bulging triangularly where resistance was least, *i. e.*, through the palpebral fissure, and equally at both canthi. In due time, under the use of astringent collyria, the remaining swelling of the outer angle entirely disappeared, whilst that of the inner, persisted, with little or no appreciable change in its size or appearance. By remaining stationary, my attention was awakened as to its real nature. As this protuberance of the inner canthus had not followed the course, nor been amenable to the treatment of the chemosis elsewhere affecting the eye, I suggested to the class the idea that it might probably be the dislocated lens. Its reality was soon disclosed, for on incising the conjunctiva with the point of a thumb-lancet, the lens, of nearly its natural transparency, immediately

issued upon the cheek. It had evidently, from the violence of the blow, escaped through a laceration of the sclerotic, and lodged beneath the conjunctiva.

CASE XIII. *Successful removal simultaneously of the eye and superior maxillary of the right side.* By M. Maisonneuve, of Paris. *New York Journal of Med.*, 1855.

M. Maisonneuve recently presented to the Academy of Medicine, Paris, a patient on whom he performed this operation, on the 27th of July. We take the following particulars of the case from the *Revue de Thérapeutique*: The patient, aged forty-six, had perceived a slight swelling, for six years, on the right inferior orbital margin; for several years the tumor seemed to remain stationary; but, about 1850, its growth became apparent, and he consulted many physicians. He took, without benefit, various remedies, as preparations of iodine, cicuta, arsenic, etc. In 1853, the cheek greatly tumefied, became the seat of deep ulceration and lancinating pains. It was soon after this that the patient came to Paris, and placed himself under the care of M. Maisonneuve. The right side of the face was now enormously swollen, owing to the cancerous degeneration of the entire superior maxilla with the soft parts of the cheek, the orbit, the inferior eyelid, and the right side of the nose, the centre of which was deeply ulcerated and discharged a fetid ichor. The patient could obtain no rest on account of the pain; left to himself, death was inevitable; and, as medical remedies had been faithfully employed, the only hope was in an operation. This had been pronounced impossible of execution by distinguished surgeons; but considering that the disease had not invaded any vital organ, that the cervical ganglia were uncontaminated, and that there was no evidence of cachexia, Maisonneuve thought that there was some chance of saving the unfortunate person by an operation, and did not deem it right to refuse this last resource of art. The operation was accordingly performed on the 27th of July, 1854. The patient took chloroform. The operator made a longitudinal incision upon the right side of the nose, prolonged to the free border of the upper lip; the second incision began at the external commissure of the eye, and passed around the external border of the ulceration and joined the first at the *alæ nasi*. By dissection the whole anterior portion of the tumor was exposed; a chain saw was then passed in at the sphenomaxillary fissure, and brought out under the zygomatic arch, and the included portion sawn through. The palatine arch and ascending apophyses of the superior maxilla were divided with Liston's forceps, and detaching the *velum palati* with the bistoury from its attachments, he everted the tumor and completed its extirpation with the scissors. He now proceeded to extirpate the eye and destroy the diseased tissue within the orbit, the nasal fossæ, and frontal sinuses. The lips of the wound were then brought together, except a vacant space in the centre of the cheek, which was allowed to remain unclosed, the better to observe the progress of cicatrization. No bad results followed, and, in six weeks after the operation, he recovered his usual strength and flesh, and, by means of an obturator, ingeniously contrived by Charrière, the loss of substance is not perceived, and the speech is as perfect as ever. On examination, the disease proved to be osteo-sarcoma of the superior maxillary bone; the globe of the eye was free, but the tissues around it were diseased.

CASE XIV. *One hundred and eighty-six pieces of glass extracted from one eye successfully.* By M. Collette. *Annales d'Oculistique: British and Foreign Medico-Chir. Review*, 1851.

Frances Paulet, æt. 47, servant to a brewer at Liege, standing near a glass door which was broken by a violent gust of wind, received the fragments in her eyes, which caused intense pain. The foreign bodies were removed at once from the right eye, but as they could only be incompletely so from the left, the reporter was sent for, March 2, 1849. He found her in excessive pain, especially about the orbit of the left eye, which was closed. A few fragments were removed from the lower lid, but careful examination could detect none upon the eversion of the upper one, and sweeping it with a pledget. Great was his surprise, therefore, next day, at learning that ten fragments of glass had passed out, but so irritable had the eye now become, that he could not re-examine it. Every day for a time, however, fresh fragments issued from the eye, and after awhile every few days. When the fragment was large and irregular, severe orbital pain announced its advent, and by voluntary movements, almost resembling convulsions, the patient amidst great suffering succeeded in disengaging it from behind the orbital cavity, and conducting it to the internal angle of the eye, whence it was easily extracted. At other times the suffering was comparatively slight and short—abundant tears, and sometimes bloody fluid, but never pus, accompanying the extrusion of the fragments. This went on until July, when she left the author's care for the Liege Ophthalmic Dispensary. There M. Ansiaux made two incisions in the superior orbital region, and fragments of glass issued until November, after which her health gradually amended, and she believed herself cured; when, 15th January, 1850, other fragments, with her old sufferings and symptoms, presented themselves. Somewhat later, fragments of bone also issued, and continued to do so at the time of the report. Between March and July, no less than 186 fragments were extracted, besides others which were not preserved—their figure being generally that of a parallelogram or isosceles triangle. The whole mass weighed 186 Belgian grains, thirteen of the fragments alone weighing 42. Although none such could be detected by the author or the commission appointed to examine the case, it was concluded that laceration of the conjunctiva must have given admission to these masses to the deep parts of the orbit. Repeated examination could detect no fragments in any of the other regions in the vicinity of the eye. No affection of the brain or of the eye itself had occurred.

CASE XV. *Blindness from worms in the eye.* *Lancet*, 1827, vol. xiii.

M. J. Cloquet communicated to the *Sitting*, a curious case of a man attacked with several subcutaneous abscesses on the head, in consequence of a considerable deposit of the eggs of flies on this part. An old man fell asleep in the open air; the flies, attracted by the bad odor which exhaled from his body, deposited their eggs in great numbers between the eyelids, in the auditory passages, on the cheeks, the head, and beneath the prepuce. After a few days the eggs produced larvæ, which, at first, occasioned a very troublesome itching, then several abscesses formed beneath the integuments of the head, and the temples, and in the orbit. When the man was admitted into the hospital, there was an ichorous discharge from all these parts, from the auditory passages, and the prepuce, containing a number of small worms, which were found to be the larvæ of the *musca carnaria*. M. J. Cloquet removed a great quantity of these worms, and employed mercurial frictions to destroy the remainder. At present, the patient is in a fair way of recovery; but, from the worms having perforated the eyes, he is quite blind. Notwith-

standing the extent of mischief produced by these animals, no hemorrhage occurred. M. Larrey stated, that he had often seen, during the campaign in Egypt, worms in wounds; but they never attacked dense tissues as those of arteries, which might account for no bleeding having occurred in the case related by M. Cloquet.

CASE XVI. *Animalcula in the eye of a child.* By Robert Logan, Esq., Surgeon. *Lancet*, 1833, vol. xxiv.

A. B., ætat. 7, was brought to me about the middle of January, 1833, affected with severe strumous ophthalmia of the left eye, and great nebulousity of the cornea, seeming to threaten the total destruction of vision. I was informed that from the month of August last the child had suffered repeated attacks. The inflammatory symptoms gradually diminished on the application of a blister behind the ear, and the administration of proper alterative remedies. There was left, however, a slight opacity of the lower segment of the cornea, sufficient to obscure, but not entirely to obstruct, the ingress of light. After the lapse of a week, the child was again brought to me, and, on examining the eye, to my great surprise, I observed a semi-pellucid body, about two lines in diameter, floating loosely in the aqueous humor of the anterior chamber. On close inspection, it appeared almost perfectly spherical, having attached to its lower part a small, white, elongated process, with a slightly bulbous extremity (very much resembling the trunk of the common house-fly), which, in consequence of its greater weight, constantly maintained the lowest position, and which, if disturbed, caused the little sphere to revolve upon its axis. When viewed in a clear light, it presented every demonstration of an organized animalcule, as with the naked eye it could be observed to project the little process above described to a considerable distance, at the same time twisting it in various directions, as if in search of food; at other times it possessed the power of contracting the trunk to a mere point, and withdrawing it entirely within its transparent membranous body—a phenomenon which could not, on any mechanical principle, be effected without the aid of a muscular apparatus both of longitudinal and circular fibres. After remaining in this position for a short time, it would project what I think we may assume is its head with considerable velocity, and which it was quite apparent communicated to itself a considerable degree of locomotion. When quite at rest, a white speck would suddenly appear upon its side or fundus, and, quickly spreading into a beautiful annulus, traversed the rest of its body, much in the manner of a single undulation from the fall of a stone into still water. This motion is certainly not of the vermicular description, as the action is by no means regular, but arises in a sudden mistiness at different points, and sometimes simultaneously at different points, and passes quickly over its surface. From this we may fairly conclude, that the arrangement of its muscular fibres bears strong analogy to that of the urinary bladder. None of my professional friends, who have witnessed it, doubt of its muscularity. Indeed, a strong light falling upon it seems to act as a stimulant, inducing it to contract, and it can then be seen to assume various changes of shape. Belonging to the simplest modification of organized animation, this singular little creature cannot, on the minutest inspection, be demonstrated to possess any excretory orifice; it is therefore a fair conjecture, that as its food, from the nature of its situation, must be of a fluid form, anything excrementitious may be removed by porous transudation.

The child's eye is, at present, in an irritable state, probably from the presence of the foreign body constantly exciting friction on the surface of the exquisitely tender iris, and the delicate lining membrane of the cornea. In its

quiescent state, it occupied, as I have said, the lower segment of the cornea, with the fundus rising upwards, so as, in a moderate light, to observe half the disk of the pupil, and prevent the little patient from reading, or seeing objects distinctly, when placed low, but which, if raised to the level of the eye, she easily recognizes. There has been no increase in its size since first observed, for, according to that beautiful law of nature, which adapts the size of animals to the sphere in which they are destined to move, and to their means of providing for their existence, it is not likely to attain greater magnitude. Unless there arises some indication of mischief to the delicate organs with which it is in contact, I should doubt of the expediency of attempting any operation for its removal, as the limited term of existence apportioned to such an animal will soon remove all apprehension of danger, and the solvent quality of the aqueous humor will speedily reduce it, when deprived of life, to a state in which the absorbents of the eye will exert their influence in carrying it off. That this is a species of hydatid, I think, no one will doubt; it has, however, not yet shown any signs of propagation: should this take place, a question would then arise respecting the necessity of an operation for its abstraction.

CASE XVII. *Removal of a worm from the eye of a horse.* Lancet, 1837, vol. xxxii.

A high-bred Arab race-horse, then in the possession of Captain Seton, town-major of Bombay, when under training was observed to become out of condition. The horse was dull, and "off its feed," and had, what I have invariably observed, the strange and almost unaccountable symptom of very great weakness in the loins. The eye affected was slightly weak, and watery, but free from any perceptible inflammation. The aqueous and other humors were in a perfectly natural state. A worm had been distinctly seen, for several days, moving about in the whole circumference of the anterior chamber, exactly like an eel in a basin of water, apparently in the full enjoyment of its natural element. It was nearly, if not quite, an inch long, of the diameter of sewing silk, and of a beautiful silvery whiteness.

Having previously secured the animal, by casting him on a soft bed of straw, in a strong light, several persons held his head down, securely. In the presence of many sporting gentlemen (one of whom secured the upper lid, with Pellicier's silver elevator), with a common cataract knife I made a free crucial incision into the cornea, below the pupil. The aqueous humor, all escaping in a sudden gush, brought in its tide the worm with it, which did not long survive the change of its situation, continuing to writhe about, as if in the agonies of death.

The eye was now secured, much after the same manner as after the operation for extraction of the cataract in the human eye, taking measures to prevent the animal rubbing it against the manger. The wound healed without a bad symptom; the aqueous humor was soon reproduced; the sight was not in the least degree injured; and the animal rapidly improved in health, and became a great and deserved favorite on the turf at Calcutta, where he was afterwards sent, and won many races.

A crucial incision was certainly unnecessary in this case. *Below* the pupil, is undoubtedly put for *anterior* to it.

SECTION II.

INJURY OF THE NOSE.

CASE I. *Nasal enlargement successfully treated.* By Dr. Charles Clay, Manchester, England. *Lancet*, 1842, vol. xlii.

In May, 1841, I was consulted by a young lady who had a peculiar enlargement of the nose, not accompanied with pain or inconvenience, excepting from the size; its appearance, however, was a circumstance to be considered: many different plans had been adopted, but without any effect. From the history of the case I suspected it arose from deficient menstruation, as those periodical discharges were not only small in quantity, but at lengthened intervals, and attended with considerable pain, which had been the case for three years. It was evident constitutional treatment was indicated, independent of any application to the local enlargement; I therefore commenced with giving the *mistura ferri composita* (L. P.) in the daytime, and two of the compound aloes pills (P. L.) at bedtime; this was more or less the constitutional treatment throughout, varied very slightly as circumstances might require. But to the local enlargement I adopted the following novel plan: Taking a quantity of plaster of Paris, I made a mould of the nose, and whilst wet, I placed tapes in the plaster to secure it afterwards; the middle of one tape fastened to the mould was intended for securing it laterally by each end crossing the cheek on the same side, and tying together behind the neck; a second tape directed its course between the eyes over the centre of the *os frontis*, over the head, and secured to the first tape behind the neck; when sufficiently hard, the mould was removed, baked, and well seasoned with oil; when thus prepared it was replaced on the nose, and secured by the tapes so as to effect a gentle and equal pressure on the organ, the weight of the mould assisting, as it was made purposely rather thick, the lower part being left open to facilitate breathing. After wearing it in this manner a week, I found the mould much too large for the nose, and sat very loosely upon it. I was, therefore, certain the pressure had effected a considerable reduction in the size of the part affected: encouraged by this, a second mould was made on the reduced organ, which was accompanied with the same satisfactory results; a third, fourth and fifth mould followed, when the nose had assumed its natural size and appearance. On comparing the last with the first mould, the contrast was very striking, and would scarcely have been believed by any person who had not witnessed the process: each mould was worn about a fortnight, with the exception of the first and last; the former about a week; the latter was advised to be worn longer, and relinquished by degrees; the constitutional treatment succeeded in effecting menstruation regularly, and in a sufficient quantity. The nose still remains its natural size. I think this plan might be applied with advantage in many cases; the effect of pressure in chronic enlargements is well known; it is only the novel way of employing it that deserves attention in this case.

CASE II. *Headache produced by a scolopendra in the frontal sinus.* *Lancet*, 1831, vol. xix.

We extract the following case from the report of the "*Société des Sciences Médicales, du Département de la Moselle.*"

A farmer's wife, twenty-eight years of age, residing in the neighborhood of Metz, had for a long time been affected with an unpleasant itching sensation in the nose with coryza, to which symptoms in the year 1827, violent headache succeeded, so that at length she was obliged to apply for medical aid. The

headache was irregularly intermittent, and generally began at the root of the nose and the middle of the forehead, or at the right frontal region, extending thence first to the right side, and then over the whole head. The attack was accompanied by a great discharge of tears, and sometimes even nausea and vomiting; the features were forcibly distorted, the jaws firmly closed, and the eyes and ears so very sensible, that she could not bear the least light or any noise. At other times she became delirious, pressed the head between her hands, and ran about in a state of distraction. The pain was, according to her statement, like the strokes of a hammer, or as if something was perforating the skull, and the fits generally returned about twelve times in twenty-four hours; sometimes the headache continued uninterruptedly for several days. The coryza existed during the whole period, and the discharge was occasionally very fetid and mixed with blood. Some medicines were employed, but no regular plan of treatment was followed, and it was not before a twelve-month's suffering that this singular affection terminated, after the expulsion of a worm from the nose, which moved with rapidity, and when placed in water, remained alive for several days; it was afterwards killed by being put in alcohol, and sent to M. Maréchal, who reported the case to the Society. He found the animal to be more than two inches in length, and one line in breadth; it had two antennæ, was of yellowish color, flat, and consisted of sixty-four rings, on each of which were two legs. M. Maréchal subsequently transmitted the insect to MM. Hollandre and Roussel, who ascertained that it was a *scolopendra electrica*.

CASE III. *Calculi in the nasal fossæ*. By M. Démarquay. Archives Générales de Méd.—Edinburgh Med. and Surg. Journal, 1845.

The occurrence of a case of calculus of the nasal fossa in a patient admitted into the Hôtel Dieu, under the care of M. Blandin, attracted M. Démarquay's attention to the subject. The subject of this case was a woman, 35 years of age, who, for a couple of months, had been troubled with considerable impediment to breathing through the left nostril. For some time past fetid purulent matter had been discharged from that nostril. She brought with her a calculus about the size of a pea, which M. Barth had extracted a few days before. She remained four days in the hospital, during the first three of which a few very small calculi, varying in size from a pin's head to that of a pea, were abstracted. On the third day one of the size of a bean was removed. Its surface was rough, and on being sawed through its nucleus was found to consist of a cherry-stone. On analysis these calculi were found to consist of phosphate of lime and magnesia, carbonate of lime and of magnesia, chloride of sodium, with traces of the carbonate of soda.

On examining the literature of this very rare disease, M. Démarquay found that fourteen cases had been recorded in which calculi of various sizes escaped, or were removed from the nasal cavities. The following is a short abstract of these cases:—

1. Bartholin, in 1654, stated that a young girl of distinction, when blowing her nose, expelled several calculi, among which was one of the size of a date-stone.

2. The same author relates, that a woman of Helsimbouurg by mistake swallowed a cherry-stone which remained several weeks in the fauces. It occasioned acute pain, and the formation of a tumor, which, however, did not suppurate; but one night, in a fit of coughing, the cherry-stone was ejected, and was found covered with a pretty thick coating of a calcareous looking substance. The tumor after this rapidly disappeared.

3. Clauder, in 1685, related the following case: A woman, 60 years of

age, subject to colds, began to be annoyed with an abundant discharge of thin mucus from the right nostril, with difficulty of breathing through it. A resisting object was felt on probing the nostril. During a fit of sneezing this body got dislodged, and was extracted. It was the size of a walnut, and was so hard that it could with difficulty be broken with a hammer.

4. Kerne, in 1700, published a case in which acute headaches were caused by nasal calculi. A young girl for about a year and a half had been subject to obstinate frontal headache, for which various remedies were used without success. Kerne ordered a sternutatory, which had scarcely begun to act before he was called in haste to see her, as she was threatened with suffocation from some body obstructing the nostrils, in which also violent pain was felt. More of the sternutatory was given, when a calculus of the size of a pea was expelled, followed shortly by several others. After the expulsion of the calculi the headaches disappeared.

5. Vitus Riedlinus, in 1706, stated that a young married woman suffered from obstruction of one of the nostrils, which was swollen, and emitted a most offensive odor. On probing the nostril, a hard substance was felt, which was seized by the polypus forceps and removed. Several calculi were thus removed, the largest the size of a bean. From this moment the patient recovered.

6. Wepfer, in 1727, published the history of a calculus which he removed from the right nostril of an old lady in 1680. It obstructed the nostril and caused a considerable mucous flow from it. It was situated in a large ulcerated hollow tumor, resembling a polypus, which filled the nostril. The tumor appeared to be connected with the roots of a carious front tooth, as pulling on it caused the movement of the tumor, and the calculus resembled the incrustation which forms on the tooth, but was harder.

7. Ruysch, in 1733, related that a young girl of five introduced into the nostril a piece of amber. It gave considerable annoyance till she was 14 years of age, when, in a fit of sneezing, it was expelled, surrounded with a thick coating of cretaceous matter.

8. Horn, in 1788, published a case in which a cherry-stone, which escaped into the nostrils, gave rise to symptoms of polypus, in consequence of becoming incrustated there with a voluminous coating of cretaceous-looking substance.

9. Saviales, in 1814, published the history of a case in which a man, 42 years of age, suffered from continued headaches and pain in the nostril. After an attack of erysipelatous inflammation, an abundant purulent secretion was discharged from the nostril, which seemed to be filled with a polypus. On seizing it, it turned out to be an earthy concretion an inch and a half long, which filled the nostril, and on being broken was found to contain as a nucleus a cherry-stone.

10. Graefie, in 1828, related a case in which an earthy concretion formed in one of the nostrils, not only giving rise to frontal pain, but also serious affection of the corresponding eye. Before the concretion was discovered and removed, the tears appeared to possess a caustic acid nature: and M. Graefie thought that the calculus was produced from matter deposited by them, modified as they probably were by the person possessing an arthritic constitution.

11. In another case narrated by the same author, in which tolerably similar symptoms were present, the calculus, which was of an oval form and about an inch long by half an inch broad, contained a cherry-stone as a nucleus, around which the calcareous matter was deposited.

12. M. Flouret, in 1829, in dissecting a subject who died at the Hospital of la Charité, found a nasal calculus of an inch and a half in diameter occupying the right nostril.

13. In 1829, Dr. Axman met with a curious case, in which severe attacks of hemierania occurred periodically for many years, but were not amenable to treatment till after taking a pinch of snuff, when a calculus of the size of a bean was discharged. The hemierania disappeared, but after a time returned. when severe fits of sneezing artificially produced, caused the evacuation of a large number of calculi with much fetid purulent matter. From this period the patient completely recovered. These calculi on analysis were found to consist of animal matter, 3.5; phosphate of lime, 8.0; carbonate of lime, 32.5; carbonate of magnesia, 12.5; with a trace of muriate of soda and oxide of iron.

14. Brodie published in 1844 the history of a case in which from infancy there had been an offensive discharge of matter from the nostril, with the usual symptoms of diseased bone; and the case was accordingly treated as such. One day, when about twelve years old, in blowing her nose, a calculus escaped, which, on being examined by Dr. Prout, was found to be composed of inspissated mucus penetrated with phosphate of lime.

CASE IV. *Death from gangrene of the fauces, caused by or attended with worms in the nose.* By Wm. Boyd, M. D., of Rock Island, Texas. Western Journal Med. and Surg., 1853.

Burke, a black man, aged forty-five years, first attracted the attention of his master on the 15th of September, 1852, by bleeding at the nose. On entering his room, I perceived an offensive odor, and on injecting a solution of zinc into the nostrils for the bleeding, several worms were discharged, bearing a resemblance to the common *maggot*. By employing warm water and soap, a considerable number were brought away; the hemorrhage was arrested by the zinc. Having found calomel and sweet oil efficacious in destroying maggots in the wounds of cattle, I directed an injection to be used consisting of these articles. The next day a number of worms were discharged.

The treatment was continued, and on the 5th of October the patient was so far relieved, that he walked a mile or two to church.

Oct. 7. I was called to the patient again, and found him complaining of a dull pain in the head, very restless, pulse hard and quick, bleeding at the nose and mouth. Enemata were used to move his bowels, and the injections into the nose, as before.

8th. Patient worse. Considerable fever; complains of pain in his head and neck. Tartar emetic, in small doses. Injections of spirits of turpentine and calomel into the nostrils.

9th. Nothing except slight swelling detected in the fauces. Symptoms appeared slightly improved.

10th. Breathing stertorous; pulse small, quick; stupor, perspiration. On examination, soft palate found in a state of sphacelus, and when this was excised, the cavity was discovered to be full of worms. After their removal, his throat having been cleansed, patient felt better, and breathed with more freedom.

On the 14th, he died.

Post-mortem.—The brain and membranes were found engorged with black blood. The branches of the olfactory nerve were dark from the presence of the same. The cribriform plate of the ethmoid bone presented a dark appearance, and other parts of this bone were soft, and filled with a dark grumous matter. The whole posterior fauces were in a state of mortification, and at one point the cervical vertebræ were nearly denuded.

CASE V. *A canister-shot through the nose and lodged in the vomer.* Lancet, 1855.

A young man was struck at Alma by an iron ball, contained in a canister-shot, the size of the circumference of the inner ring of a half-crown piece. It drove in the ala of the nose, and lodged in the centre of the vomer, where it was so firmly wedged that every attempt at Scutari to remove it was unsuccessful. The man was in good health, and cheerful. On the 5th of Feb., Mr. Parry put him under chloroform, divided the adhesions of the ala nasi, enlarged the opening a little upwards through the cartilage, and downwards through the upper lip. He then extracted the enormous iron shot, weighing three ounces and seven drachms, using a scoop and an elevator. The alæ were then replaced, and the wound healed by the 11th, and the patient not a little pleased in having got rid of so unpleasant a lodger.

SECTION III.

AFFECTIONS OF THE MOUTH.

CASE I. *Enormous mouth (six and a half inches in its transverse diameter), in a young man.* Lancet, 1828, vol. xiii.

Christian Wekstedt was born with a very large mouth, and in his seventeenth year, the transverse diameter of the mouth amounted to six inches and a half. The mother believed that the child had been born with its foot in the mouth; but as this was not observed at the time, it does not appear very probable. The tongue was so large that it always hung between the teeth, and, according to the mother, was in that position at the time the child was born. To what cause could this unusual size of the mouth be attributed? Professor Langenbeck conceives, that the size of the tongue prevented the complete formation of the mouth, since it extended from one ear to the other, just as in the seventh week of pregnancy. By the removal of the callous edges of the more internal parts of the mouth, and the use of sutures, this part of the body was restored to its natural size and shape.

CASE II. *A pin removed from the duct of Wharton.* By H. F. Campbell, M. D., Prof. of Surgical Anatomy, &c., in the Med. Col. of Georgia. Southern Med. and Surg. Journal, 1848, vol. iv.

The novelty of the following case will be seen to warrant its publication.

Of foreign bodies in the duct of Wharton, so far as we know, there is on record but one case, which is that presented by M. Robert to the Anatomical Society of Paris, and which indeed has been considered quite remarkable. It occurred in the person of a shoemaker, in which case the orifice had been found to admit a piece of hog's bristle which subsequently became the nucleus of salivary calculus.

Julia, a nurse, aged fourteen years, while engaged at work, with a pin in her mouth, felt pain under the tongue, and endeavored to remove the pin, but on feeling for it could only find the *point* protruding at the side of the frænum linguæ. Her efforts to extract it by the point caused it entirely to disappear: becoming alarmed, she called for assistance. On examination, there could not be seen the least trace of any foreign body whatever: she said that "the pin was under her tongue, and had gotten into the flesh *headforemost*." It gave her no pain, except when disturbed with the fingers; the orifice of the Whartonian duct was patulous, and some saliva was flowing from it. On applying the finger to the floor of the mouth the pin could easily be felt near the base of the lower jaw—though from the distance to which the head had proceeded

towards the cæcal extremities of this duct, it was impossible to protrude it by applying pressure from behind, and further, from the handling to which the parts had been subjected, the point had been pushed out of the direction by which it entered, and having pierced the side of the duct was resting on the alveolar process. It was very movable, and receded on the slightest pressure.

Failing of its removal by manipulation, the following method was adopted: Its exact situation being ascertained, the object together with the parts surrounding it was seized by the forefinger of the left hand in the mouth and the thumb in the digastric region, and pressed outward against the inner surface of the lower jaw under the alveolar projection: a tenaculum was then introduced from within outward through the mucous membrane (avoiding the situation of the gustatory nerve which near this place crosses the duct), so as to inclose the duct and hold the pin fixed; on elevating the tenaculum, the point of the pin became prominent about three lines posterior to the orifice of the duct. The mucous membrane and coats of the duct being cut through with a scalpel, the pin was removed with the dressing forceps by the *point*, which protruded through the opening of the incision. A copious discharge of saliva followed its removal. The incision healed rapidly, and the patient recovered without any trouble. The pin was $1\frac{1}{4}$ inches in length, and of a proportionate thickness.

CASE III. *A salivary concretion weighing one hundred and fifteen grains.* By T. C. Sympton, Surgeon, of Lincoln, England. *Lancet*, 1835, vol. xxix.

Mrs. Wise, of Branstons, called upon me about two years since to have a tooth extracted, which she described as being a very ugly one. Upon examination I found the two molares of the superior maxillary bone completely hidden in a growth of apparently bony substance, which projected so much externally as to disfigure the face, and possessed great firmness of attachment to the jaw, on touching it, with hardness, and the enamelled appearance which is frequently noticed in exostosis of the jaw. The projection being outward, I told her not to alarm herself, but to call upon me every three or four months, which she did until the last three months. When she last called, it was with a very joyful countenance, to inform me that the whole substance had fallen off on the night previous, at supper time. The concretion is now in my possession. It is divided into one large and two very small pieces, the whole weighing 115 grains. The projection of the larger piece from the base is three-fourths of an inch; its length is one inch and a quarter; it is of a yellowish-white color, and has a rather conical appearance, the apex, when attached to the teeth, being directly opposite Steno's duct.

The only conjecture that I can form respecting its formation is, that, as the saliva had passed from the duct, an abnormal deposition of tartar formed an incrustation, which gradually (near six years) accumulated until it had attained the extraordinary size I have above detailed.

It is worthy of notice, that there has never been the slightest accumulation of tartar on the left side, nor from the submaxillary glands.

CASE IV. *Death from the impaction of a portion of a barley beard under the tongue.* *Lancet*, 1844.

Dr. Ranking records the case of a young man who, after putting a grain of barley into his mouth, felt something prick him under the tongue. He removed, as he supposed, the offending substance. Some days after, he became the subject of severe inflammation at the root of the tongue, and died.

Upon cutting into the neck, the cellular tissue was found to be dark, and filled with air. Dissecting inwards through the genio-hyoid muscles, we came

to a gangrenous abscess, the size of a turkey's egg. The genio-hyo-glossus and lingualis muscles, and the substance of the tongue, as far back as the epiglottis, were converted into complete "putrilage." In the centre of this mass of gangrene was found a portion of barley haw or beard, an inch in length. Why the abscess was not discovered during life? or being discovered and opened, whether the patient might not have recovered? are questions which it is now too late to discuss.

CASE V. Penetration of the soft palate by a tobacco-pipe; hemorrhage; ligature to the carotid, &c. Lancet, 1837, vol. xxxii.

Samuel Edmonds, aged 41, on the evening of Tuesday the 26th of March, being intoxicated, fell forwards, with a pipe in his mouth, which broke, and wounded the soft palate. He was confident that no part of the pipe had remained in the wound. The throat swelled during the night, and on the following morning he swallowed with great difficulty. Thus matters continued until Thursday the 30th, when he applied for relief at this hospital, and was admitted as an in-patient. At 12 o'clock, on the same day, Mr. Mayo saw him. The soft palate was swollen on the right side, and elastic to the touch, as if it contained fluid. The swelling extended to the right tonsil; the right side of the neck, below the ear, was likewise swollen, and tender on pressure. There was no swelling or tenderness upon the left side of the neck, nor about the left tonsil. On the middle of the soft palate there had been an oblique lacerated wound, which appeared nearly healed. Supposing the swelling to be an abscess, Mr. Mayo punctured it with a lancet, at the lower part, and near the middle of the soft palate, when about a teaspoonful of matter, mixed with blood, escaped, and then pure blood, partly liquid, partly clotted. In five or six minutes, three or four ounces of blood thus came away. The patient rinsed his mouth with cold water, and the bleeding stopped.

In the evening the house-surgeon thought that he saw something projecting out of the wound, which he drew away. It proved to be a piece of tobacco-pipe, two inches in length. The removal of this body was followed by profuse arterial hemorrhage; a quart of blood came away, in seven or eight minutes, during which time the house-surgeon ineffectually compressed the carotid arteries. The hemorrhage then seemed to cease spontaneously. Mr. Mayo saw the patient on the same night again, and directed the external application of cold. The pulse was not greatly reduced; the temporal artery beat on the right side as forcibly as on the left. The junior house-surgeon watched the patient during the night.

On the following morning, 31st March, at nine o'clock, the hemorrhage recurred, and the patient lost ten ounces of arterial blood in a few minutes. The bleeding again ceased spontaneously. Mr. Mayo's colleagues met him in consultation in the forenoon, when it appeared to them to be certain, from the alarming extent of the hemorrhage, either that the internal carotid, or some large branch of the external, had been wounded by the broken pipe, or had subsequently opened by ulceration, and, but too probably, from the second recurrence of hemorrhage, that if no means were taken to prevent the bleeding, it would again recur, and, in all probability, prove fatal. They, therefore, agreed that the trunk of the right common carotid should be tied, which operation Mr. Mayo performed on Friday afternoon. The artery was tied half an inch above the point where it crossed by the omo-hyoid muscle. The patient complained of faintness directly after the operation, but revived upon a cold towel being applied to his forehead; and, on drinking some port-wine and water, he said that his throat felt easier, and that he swallowed better. He passed the day tranquilly, and slept at intervals during the night.

On the following morning, April 1st, hemorrhage again supervened; six or seven ounces of arterial blood, partly clotted, came away from the throat, rapidly, as before.

Under these circumstances, Mr. Mayo and his colleagues again met in consultation, and it appeared to them, on considering all the features of the case, that it was probable that the bleeding came from the right internal carotid; or, at all events, it seemed certain that the hemorrhage did not proceed from any vessel of the left side, but was derived by the internal carotid from the vessels of the brain. The artery from which the bleeding took place, might either be the internal carotid, or a branch of the external. One thing they agreed in, namely, that if it were possible to tie the internal carotid, near the base of the skull, the hemorrhage would be completely restrained; but they greatly doubted the possibility of effecting this. Nevertheless, the case was considered so desperate as to authorize the attempt. Therefore, in a subject in the school of the hospital, Mr. Mayo displayed the artery by dissection: and, on another body, went through the steps of the operation, without much difficulty. The obstacles to be apprehended in the living body did not seem to be insurmountable. Accordingly, he thought it justifiable to attempt it in the patient.

The steps of the operation were, first, to divide the skin, to the extent of three inches, along the anterior edge of the mastoid process of the temporal bone and sterno-mastoid muscle. The operator then divided the anterior fourth of the fibres of that muscle, and separated the parotid from the mastoid process. He then divided the posterior portion of the digastricus, close upon its attachment, and reached the styloid process, the end of which he broke off with a forceps, and came upon the front of the transverse process of the second cervical vertebra. It was at this point that he expected to be able to secure the artery, but he was unable to separate the vessel from the adjacent parts. After long and reiterated trials, he passed the needle under what he supposed included the artery, but he could not, at that great depth, and in so narrow a cavity (there being no sensible pulsation, as the trunk had been tied below), succeed in identifying the artery, and separating it from the nerves which accompany it. At the close of the operation, he extended the incision downwards, in the hope of making out the trunk of the vessel lower down, and then tracing it upward; but here he found that the previous inflammation had obliterated all distinction of parts, so that he was compelled, however reluctantly, to give up the attempt.

For fifty hours after the operation there was no recurrence of hemorrhage. The patient was otherwise doing favorably. His mind was perfectly collected; tongue moist, but slightly furred; pulse 94, and soft. He swallows liquids easily, and with less pain than before the removal of the portion of broken pipe. Very little blood was lost in the attempt to secure the internal carotid. The *arteria posterior auris* was divided; it bled freely, but not *per saltum*, and was tied. The occipital artery was exposed, but not divided. In describing the case at the close of his surgical lecture, April 3d, Mr. Mayo said, that he ventured to entertain strong hopes of the recovery of this patient, and that he thought it certainly not impossible, that the disturbance of parts attending the second operation, might have contributed to render the recurrence of hemorrhage less likely than it otherwise would have been.

CASE VI. *Extraction of a tobacco-pipe from behind the ear after piercing the mouth.* Lancet, 1854.

Mr. Henry Smith showed a portion of a tobacco pipe, nearly two inches in length, which he had extracted from behind the ear of a boy, who, between

two and three years previously, had fallen down whilst holding a long clay pipe between his teeth. When the child was brought to him, there was a swelling over the mastoid process, and a small aperture over it, by which some foreign body was detected, which at first was thought to be dead bone, as no history of the accident with the pipe had been obtained. When, however, the foreign body was extracted, the mother first mentioned it. She stated that after the accident the boy had been seized with severe illness, accompanied with great pain in the head. These symptoms, together with an inability to open his mouth, continued for some months, at the end of which they subsided, when the swelling first appeared behind the ear, and continued there for two years; it had been thought to be merely an abscess, and treated accordingly. On examining the interior of the mouth, which could only be opened half way, Mr. Smith could see an opening in the mucous membrane, just at the base and inner side of the ascending ramus of the lower jaw, through which the piece of pipe had penetrated. It must have passed along the inner and posterior border of the jaw, amongst the important vessels and nerves, and gradually made its way towards the surface, where it had remained for two years.

CASE VII. *Nightmare from elongated uvula.* By M. West, of Belgium. Amer. Journal Med. Sciences, 1851, vol. xxi.

Bronckaert, a fusileer of the 7th infantry, who had been a soldier since January, 1849, of a feeble aspect, came to M. West in the course of last March, to request twenty-four hours' exemption from duty, to enable him to recover from the fatigue and fright which he suffered during the night from the apparition of a monster, which threw itself suddenly upon him, so as nearly to smother him, and against which, he said, he had struggled for a long time before making his escape. This strange story led the author at once to suppose that the man had had nightmare. After quieting his mind upon the subject of the monster, which so much alarmed him, the doctor gave him twenty-four hours' exemption, at the same time telling him not to come back to him upon the subject of his dreams. He thought he would not see the man again, but next day Bronckaert came back to say that he had passed a night as horrible as the preceding one. M. West tried to explain to the man the absurdity of his terror; advised him to take a little food in the evening, to sleep on his right side, with the head and shoulders a little raised, thinking that these means would suffice to relieve him.

Bronckaert's torments, however not having ceased, he came again to the doctor, after having followed his advice for three weeks, and told him that he now saw no hope for relief from these attacks, which had begun more than a year before his enlistment, and under which he expected soon to perish. Having remarked during the interview an obvious imperfection in the man's respiration, Dr. West looked into his mouth to examine the cause, and saw, to his astonishment, that the uvula was about two inches long and four lines broad, although the man had never referred any of his complaints to this quarter. Thinking that the long uvula was the cause of the suffocation and fright which the man suffered during his sleep, Dr. W. instantly cut off from the uvula an inch and three-quarters of its length. The portion excised, being of unusual length, was preserved in spirits, and, after the usual shrinking from the alcohol, still measures an inch and a half.

Dr. West saw the man next morning. He was in an ecstasy of joy. The monster had not reappeared, and he had passed a good night. That the uvula getting into the glottis was the cause of the man's sufferings appeared both from the complete relief which he thus obtained and from his subsequently becoming strong and fat.

CASE VIII. *Case of bifurcated epiglottis.* By W. H. Manifold, Esq., of Liverpool, England. *Lancet*, 1851.

A child was attacked with laryngismus stridulus within the first week after birth, from which affection it suffered repeatedly till its death at four months old; treatment afforded but little relief to the attacks; the head showed no signs of congestion; the bowels were regular, and it was fed entirely from the breast, so that the cause of the affection remained unknown. But about a week before its death, on examining the tongue, and depressing it somewhat forcibly to examine the fauces, two little horns were observed at its root, and were found, on closer examination, to be the bifurcated epiglottis, forming, indeed, almost two distinct valves. To this malformation the laryngismus was then referred. I had not the opportunity of a post-mortem examination, and therefore can elucidate this case no farther. Perhaps some of your readers may, like myself, not have heard of such a peculiarity.

SECTION IV.

AFFECTIONS OF THE TONGUE.

CASE I. *A foreign body in the tongue for thirty-two years.* *Lancet*, 1846.

A German soldier was wounded in the battle of Gross-Görschen (2d May, 1813), by a musket-ball, which penetrated the right cheek, carrying away the four last molars of the upper jaw, and, passing through the tongue, made its exit through the left cheek, carrying away several teeth of the left side of the under jaw. The wounds healed in six weeks, and, except the loss of the teeth, no other deformity remained but the cicatrix of the tongue, which did not impede his speaking or chewing. During the spring of the year, at which time the patient was subject to pulmonary and cerebral congestion, severe pains, with slight swelling of the tongue, came on, to which was added, in the year 1829, a small swelling of its right side, which suppurated and discharged thin matter, after which it gradually healed. On the 2d of May, 1845, a similar swelling made its appearance in the same place, which opened without discharging any matter, and, after some days, what appeared to be a small piece of bone presented itself in the opening, which on being removed, proved to be the second molar tooth, which had penetrated the tongue from the musket-shot thirty-two years previously, and had during the whole time caused no great inconvenience. The roots of the tooth were broken off by the neck, and the whole surface covered by calcareous deposit.

CASE II. *Sudden death from enlargement of the tongue.* *Lancet*, 1827, vol. xiii.

Thomas Forder, æt. 46, a laborer, was brought to the hospital in a most deplorable and exhausted condition, about one o'clock in the day, with a prodigious enlargement of the tongue. His appearance was really frightful; the tongue having enlarged three times, at least, its natural size, it projected from between the teeth, and completely distended the lips and mouth. It was not in any way discolored except near its apex, which was rather livid, apparently from the pressure of the teeth; a quantity of very viscid saliva constantly dribbled from his mouth; the countenance extremely dejected; pulse 120, and very feeble. The respiration (which was not so much impeded as might have been expected) was performed entirely through the nostrils, the mouth being so completely occupied by the tongue as to render the patient incapable of the most indistinct articulation. The enlargement appears to be unattended with pain, except the sensation of distension. When questioned,

he refers, by placing his hand on his head and chest, to great uneasiness in these parts. His wife, who accompanied him to the hospital, gave the following account of the commencement of the complaint: Her husband returned home from his work apparently in good health, about eight o'clock on the preceding evening; prior to his retiring to bed, he complained of an uneasy sensation about his tongue, as if it felt sore, which he attributed to a slight cold. About five o'clock on the following morning he awoke from a sound sleep in a state of considerable agitation, when he said he was convinced that his tongue was very much swollen; his speech appeared to be much affected. After some little time, he was induced to lie down again, when he slept uninterruptedly until eight o'clock, by which time the size of the tongue had so much increased as entirely to prevent his speaking. A surgeon was sent for, and advised his being immediately removed to the hospital of Winchester County.

Ten o'clock. On his admission to the hospital, Mr. H. Lyford attended, and directed that as many leeches as could be made to adhere should be immediately applied to the tongue, and five grains of calomel, and $\frac{z}{ss}$ of cathartic mixture, to be taken directly. The medicine was administered by insinuating it gradually between the corner of the mouth and side of the tongue; it was swallowed without much difficulty.

Two o'clock. The aperient medicine has acted copiously four times: twelve leeches only could be applied, but the bleeding was rather copious, and continued for some time. The patient has taken some beef tea and milk, which were exhibited by an elastic tube through the nose.

Five o'clock. Mr. Lyford visited the patient, and found the enlargement still undiminished; made three very deep and extensive incisions into the substance of the tongue, one on the dorsum, and two laterally; the patient did not express the least pain at the operation. The hemorrhage which followed the incisions amounted to six ounces, and subsided spontaneously. Ice to be constantly applied over the part in a bladder.

Nine o'clock. No relief has been afforded by the operation, the enlargement remaining exactly the same. The glands under the jaw have become excessively enlarged, and there is a general puffiness of the whole neck. The patient so much exhausted as to be unable to bear the loss of more blood. Ordered a large blister to be applied under the jaw; the ice to be discontinued; the strength to be supported as much as possible by beef tea, milk and arrow-root.

Second day, ten o'clock A. M. The enlargement of the tongue as before. Patient has passed a quiet night without sleep, but he is evidently sinking. Surface of the body bedewed with a cold perspiration, though the respiration is not more impeded than on his admission; pulse small, feeble, and extremely quick; countenance expressive of the greatest anxiety, the features quite collapsed. The blister has produced large vesications; the swelling of the neck has not increased. Patient perfectly sensible; the extremities cold. Ordered bottles of warm water to be constantly applied to the feet and stomach; warm brandy and water to be exhibited occasionally, with a solution of ammonia in camphor mixture, to be given every hour.

Four o'clock P. M. The patient expired about a quarter before one o'clock, and was sensible until within five minutes of his dissolution, the tongue having neither diminished nor increased in size from his first admission.

On a minute dissection of the body being made, no unnatural appearance could be detected, which could tend to explain the origin or nature of this singular disease; in fact, every part presented a healthy appearance.

This certainly was a most rapid case. We regret the omission of the constitutional peculiarities and habits of the patient.

CASE III. *Removal of a large fibrous tumor from the tongue.* By A. Waterhouse, M. D., of Exeter, Maine. Boston Med. and Surg. Journal, 1855.

Wm. Canney, of Exeter, æt. 16 years, in good general health, came to me, with his father, wishing my advice in respect to a tumor situated on his tongue. The tumor was first noticed about three years previous, then of small size, but increasing gradually since, until the time of my seeing it, when, from its size, it caused him great inconvenience. His face was somewhat enlarged on the right side, in consequence of the enlargement of the buccal cavity to accommodate itself to the slow yet steady growth within. On examining the tongue, I found a tumor of considerable size situated on the right side of its upper surface, at the same time inclined to the side, so as to push the substance of the organ to the left, and compress it to very narrow limits. The tumor was of considerable firmness, somewhat elastic, and very well defined anteriorly, at the distance of an inch from the extremity of the tongue, when the organ was in a state of rest, and not appearing to implicate its structure; but posteriorly, it seemed to be combined with the substance of the tongue, and not so well defined. Injected vessels, of large size, were running over its posterior surface, and extending along its borders; otherwise the skin appeared to be healthy, though much stretched. It had caused him no pain, but within a few months there had been some soreness at its upper part. Different opinions had been expressed by physicians, who had previously examined the case, relative to its character and probable termination.

After a careful examination, I diagnosed a fibrous tumor, and prescribed removal, as the only means of relieving him from such a barrier to speech and deglutition, and also from the inevitable consequences, should it thus be allowed to remain. Accordingly, on January 23d, 1854, chloroform having been administered, I proceeded to operate, by first passing a strong ligature through the end of the tongue, to secure its movements; I then directed an assistant to draw the tongue forward and to the left, thereby bringing the tumor as far towards me as practicable, and plunging into it a hook, I made a semilunar incision along its side, and another along its superior border, including, between the two, all the integuments except what was considered sufficient to close the wound. The anterior portion was easily separated from the parts beneath; but posteriorly, it was found to involve the substance of the tongue, so that I was obliged to carry the dissection deeply into the organ, in doing which, the lingual artery was divided, and sprung furiously. The tumor was immediately removed, and the artery seized with a forceps. A ligature was applied and knotted, by means of a thumb forceps in each hand; an operation obviously attended with some difficulty; from the situation of the vessel, but which I preferred to other methods usually resorted to under like circumstances. After the hemorrhage had been arrested, the wound was cleansed and brought together by three points of interrupted suture, and the operation finished; the whole time occupied being only a few minutes. The wound healed kindly; so that in fifteen days after the operation, he was able to attend his school, and read aloud tolerably well.

The tumor, after removal, was of an ovoid shape, *two and a half inches in length, one and three-quarters in breadth, and weighed twenty-two pennyweights.* Microscopic examination proved it to be of a fibrous structure, involving but not invading the muscles with which it came in contact. Slight traces of fat were found in its central portion, where it was of a brownish color; but nothing malignant could be detected about it.

I saw the patient a few days since. There yet remains, at the posterior part of the cicatrix, a slight depression, and the tongue is somewhat confined, by the cicatrix, so as to prevent the protrusion or retraction of the right side

of it, to that extent which it would otherwise be capable of; but in all its usual movements, as in masticating, or even in speaking, it causes him but trifling inconvenience.

CASE IV. *Removal of part of the base of the tongue.* London Med. Times, 1844.

M. Sédillot operated in the following manner in a case in which the left half of the tongue was involved in cancerous ulceration, extending back nearly to the epiglottis. After extracting the first left incisor tooth, a vertical incision was made to the left of the median line, through the lower lip, the integuments of the chin and neck, down to the os hyoides. A narrow bistoury was then passed behind the corresponding portion of the maxilla, after which the bone was divided by a single stroke of the saw. Two assistants having then separated the branches of the maxilla, the soft parts of the left side were divided as far back as the palate by means of a straight bistoury, and then the diseased portion of the tongue was removed by an incision through the median line, carried out behind with a sweep, parallel with the epiglottis. The lingual artery was tied: the dressing consisted in placing the portions of the maxilla in apposition, and so retaining them by means of a plate of gold, retained in front of the teeth by means of a silk thread. The lip was brought together by means of the twisted suture, and an opening was left in the integuments of the neck, for the passage of pus and mucus. In nine days after the operation, the lip became united, the jaw-bone consolidated, the wounds of the tongue and mouth healed, and everything in fact indicated complete success. There was no tendency to retraction of the tongue, as the *genio-glossus* muscle was uninjured.

CASE V. *Amputation of a considerable portion of the tongue.* By M. Maisonneuve, Surgeon to Cochin Hospital, Paris: Translated by Dr. Campbell for the New York Med. Gazette, 1854.

Dr. J——, a corresponding member of the Academy of Medicine, and chairman of the Committee upon Vaccination, had been for several years engaged in transmitting, into the various departments, the vaccine virus preserved in small glass tubes. This duty, which he performed in person, made it necessary to hold a certain number of these tubes in his mouth: it often happened that their rough extremities produced scratches upon the tongue, resulting in small indurations; these latter would generally disappear at the end of a few days; but at length there supervened an induration which continued to remain, and was the origin of a lesion of more serious nature.

At length M. J., tormented by the persistency of this induration, endeavored to make it disappear by means of cauterization.

At first he employed the nitrate of silver, and afterwards the acid nitrate of mercury; but this plan of treatment, instead of arresting the progress of the disease, only served to aggravate it. Exfoliations of the epidermis were now developed upon the surface of the tongue, and at a later period the middle portion of the organ was deeply ulcerated. At the advice of some professional friends, he submitted to the more energetic process of the actual cautery, but this only gave increased activity to the disease.

The whole anterior part of the tongue, as far as the calyciform papillæ, had now become the seat of an induration to the extent of some eight centimetres, while the central ulceration continued to make rapid progress; to these symptoms were soon superadded the lancinating pains, which left the patient no repose.

He now consulted Dr. Ricord, who submitted him to a course of iodide of

potassium. In spite of this treatment, the disease daily grew worse; the tongue, enormously swollen, finally occupied the entire buccal cavity; the saliva ran in a continued stream; speech had become impossible, and the patient was obliged to live entirely upon liquid nourishment. In such a state of affairs, Doctor J., under M. Ricord's advice, consulted me.

In view of an affection of so grave a nature, which had so obstinately resisted the most rational plans of treatment, I felt it my duty to propose amputation as the only resource. It was, accordingly, resorted to, on the 24th of August, at the Maison de Santé of Doctor Pinel, in presence of Messrs. Laney, Ricord, Richard, Dumotet, Langlebert and Pinel.

The patient having been previously subjected to the influence of chloroform, I first divided the lower lip and the soft parts of the chin, in the median line. I then, by means of a chain-saw, effected the section of the lower jaw-bone, the two branches of which being separated, enabled me to seize the tongue and draw it out. By a rapid dissection, the diseased organ was next separated from the healthy parts as far as its anterior half, and to the extent of eight centimetres. The sublingual gland was also obliged to be sacrificed. Ligatures were applied to all the important vessels, so as to prevent all hemorrhage.

After this operation, the branches of the jaw-bone were brought together again, and maintained in contact by means of a thread wound around the incisor and canine teeth: the ligatures upon the vessels were brought out below the chin, in the inferior angle of the incision, and the edges of the wound were brought together by means of the twisted suture.

Despite the extremely grave nature of this operation, no untoward accident has occurred. The cicatrization of the external parts has been effected by the first intention; the enormous loss of substance has been rapidly repaired; the divided bone has again solidly united; and, what is most remarkable, the patient, now forty days after the operation, has recovered his powers of speech, as well as the ability to seize and masticate his food. Anatomical examination has demonstrated the fact that the disease belonged to the epithelial variety of canceroid affections.

Everything leads us to indulge in the expectation that there will be no return of the disease.

CASES VI. and VII. *Extirpation of healthy tongues.* Dr. Huston's Catalogue of Museum, College of Surgeons, Ireland, 1840.

Two healthy tongues extirpated by evil-disposed persons, during the lifetime of the sufferers, with a view of preventing their giving evidence at a criminal trial.

A gang of ruffians waylaid the unfortunate men, threw them down, kneeled on their chest, and squeezed their throats, so as to make their tongues protrude from their mouths. This being effected, the tongues were laid hold of, pulled forcibly forwards, and cut out from near the root, by a short, sharp, curved weapon, like a gardener's knife. The victims of this atrocious deed recovered without ligature to stop bleeding, or other special surgical treatment: and regained, afterwards, sufficient power of speech to convict and bring to punishment their assailants.

CASE VIII. *Amputation of the tongue and a portion of the anterior pillar of the fauces.* B. M. Giamattei. Gazette Méd. de Paris, from Gaz. Med. Ital. Toscana, 1851.

A woman in her fifty-fifth year, of good constitution, was admitted into the hospital of Lucca, for the removal of a carcinomatous tumor of the tongue.

The first steps of the operation were those laid down by M. Regnoli; the flaps were dissected back, the incision carried through into the mouth, and the tongue drawn through the opening down upon the anterior part of the neck. The diseased mass was then excised by semi-elliptical incision, and a ligature placed upon the lingual artery. Then a portion of the anterior pillar of the fauces, which was found to be diseased, was cut away with a probe-pointed bistoury, in doing which the hemorrhage was such as to require the application of the actual cautery. And lastly, the remains of the tongue were returned to the mouth, and the flaps fixed in their proper position by interrupted suture. The result was very successful. The wound in the integuments healed by the first intention, and without any difficulty. On the second day, it was possible to swallow some tablespoonfuls of soup; and on the fourth to chew and speak. In a fortnight the patient was well.

SECTION V.

AFFECTIONS OF THE JAWS.

CASE I. *The face transfixed by a bayonet.* Chelius's Surgery, by South, vol. i. p. 471.

Fardeau relates the case of a soldier, wounded at the battle of Pultuska, in 1806, by a dismounted bayonet impelled by a ball, which struck him on the right temple, two fingers' breadth beyond the angle of the orbit, and a little above it, passed up to the hilt, from before backwards, and from above downwards, so as to traverse the maxillary sinus on the opposite side, and projected five inches. The man was knocked down, but did not lose his senses. He made several ineffectual efforts to pull the bayonet out, and two comrades, one holding the head, whilst the other dragged at the weapon, also failed. The poor wounded man came to me leaning on the arms of two fellow-soldiers. I endeavored, with the assistance of a soldier to pull out the bayonet, but it seemed to me as if fixed in a wall. The soldier who helped me desired the patient to lie down on his side, and putting his foot on the man's head, with both hands he dragged out the bayonet, which was immediately followed by considerable hemorrhage, the blood pouring forth violently and abundantly. The patient then first felt ill, and, as I thought he would die, I left him to dress other wounded. After twenty minutes he revived, and said he was much better, and I then dressed him. We were in the snow, and as he was very cold the whole of his head was well wrapped up in charpie and bandages. He set off to Warsaw with another soldier; went partly on foot, partly on horse-back, or in a cart, from barn to barn, and often from wood to wood, and reached Warsaw in six days. Three months after, I saw him in the hospital, perfectly recovered. He had lost his sight on the right side; the eye and lid had, however, preserved their form and mobility, but the iris remained much dilated and immovable.

CASE II. *Enormous tumor of the upper jaw successfully removed.* By R. O'Shaughnessy, Esq., M. R. C. S., Prof. Med. College, Calcutta. Calcutta Medical Quarterly. Lancet, 1838, vol. xxxiv.

Woodey Morrol, æt. 21, a Hindu of the farmer caste, tall, thin and slightly emaciated, native of a village called Pangey, in the district of Kasba, which is a day's march from Jessore, and about three days' journey from Calcutta, presented himself at the Gurranhatta Dispensary on the 6th of November, 1837, under the following circumstances:—

He says that about a year ago a swelling formed in his left cheek, immediately above the second grinder, about the size of a sparrow's egg, causing

much pain and inconvenience; that it gradually increased in size, and about four months from its commencement, it had attained the bulk of a large orange, when he sought relief from a native doctor, who told him it was an abscess, which he promised to cure as soon as he thought it soft enough to puncture, and accordingly, in three or four days, though the hardness of the tumor did not at all diminish, he commenced his treatment by thrusting a needle into it, but no matter flowed from the wound thus formed; the doctor then set to work to bring it to a head, and for a few days more, frequently rubbed it with some mysterious compound which he appeared to prepare with great skill and care; but this disappointing his expectations also, he gave it up, and absconded. The puncture made into the swelling with the needle produced no ulcer or fungus, though the operation caused great pain and suffering to the patient.

From the time the doctor ceased his treatment the tumor has gone on increasing; it gradually protruded into the mouth, and six months after its first appearance it commenced bleeding copiously once or twice a month, and he says the bleeding was more abundant and more certain to return at the full of the moon than at any other time during the month. This periodical discharge of blood did not produce any salutary alteration or effect any check on the advancement of this frightful disease; it still continued to increase in pain and bulk till, after filling the mouth so as nearly to produce suffocation, it at last (about six weeks ago) protruded from that cavity through the lips, and went on rapidly increasing up to this day.

He positively says that he never received an injury of any kind in that cheek or jaw, and that he never had a tooth drawn or an unsound one. On his admission into the Dispensary, the tumor presented the following appearance:—

An enormous growth completely occupied the left side of the face, rising to a level with the floor of the orbit and extending a long way below the inferior maxilla; but unattached to it, occupying the whole of the anterior and left side of the mouth and protruding between the lips, pressing down the lower jaw, so as almost to make the chin touch the throat, and flattening the nose so as to leave no trace of the natural prominence of that organ. Still there was no difficulty of swallowing, and the patient seemed to breathe without



inconvenience through the right naris. That portion of the tumor which protruded through the mouth, was of a bright red color and covered with mucous membrane, having at its upper part the canine and the two incisors of its own side, with the central incisor of the opposite maxilla, sticking out of it. The dimensions of this mass were as follows: From the part near the ear to the most prominent point which protruded from the mouth, exactly twelve inches, and from that part which bulged below the inferior maxilla to the edge of the

orbit, about ten inches. It looked, as near as may be, equal in size to the patient's head. The skin over the tumor was perfectly sound and not adhering to it, and many of the muscles of the cheek still retained their healthy actions; there was not the slightest trace of ulceration on any part of the tumor, and the principal source of pain to the patient appeared to be from distension and pressure on the surrounding parts.

He always hung a cloth upon the tumor, the end of which he kept constantly applied to his mouth for the purpose of collecting the saliva which was secreted in great abundance, and also to concentrate the sound of the voice when speaking.

Taking everything into consideration, the youth of the patient, and his general good health, and also the benign character of the tumor, and its freedom from any attachment to the lower jaw, I felt not only warranted but in duty bound to offer to this poor sufferer the only chance now left for him of escaping a lingering and frightful death, which of course was only to be hoped for by his submitting to an operation, and he not only willingly, but joyfully acceded to the proposal.

I must here mention that what gave me greatest confidence—in fact, what made me feel almost certain of success—was the perusal of a paper by Mr. Liston on the “tumors of the mouth and jaws,” in which he states several cases of enormous tumors of the upper jaw operated on by himself, and so successfully, that I did not doubt for a moment as to the issue of this case, as I considered my patient a much more favorable one to operate upon than any of those whom Mr. Liston mentions, though at the same time, the tumor was much larger than any removed by that justly celebrated surgeon, or indeed by any other surgeon in Europe, so far as I can ascertain.

On the 9th, three days after the patient was admitted into the Dispensary, I had him taken to the theatre of the Medical College, where, for the advantage of the pupils, and also as having there better light and room than in any apartment in my dispensary, I thought it best to operate.

The patient being seated in a stout arm-chair, and his head supported by Dr. Corbyn, who kindly offered to undertake that charge, while a second assistant, Dr. Goodeve, stood at his left side prepared to make pressure on the carotid artery, if at any time during the operation the bleeding called for such interference, I commenced the operation by making a cut through the skin over the upper part of the tumor, commencing at the posterior edge of the left malar bone and terminating in the upper lip, which I divided about an inch from the corresponding ala of the nose. I then cut from its bony attachments the cartilage of the nose, turned up the left ala and continued the dissection as far upwards as the edge of the orbit, and back to the zygomatic process of the malar bone, which I divided. I next carefully raised the periosteum of the floor and external side of the orbit with the handle of the knife, and again took the bone-nippers and cut through the malar bone into the speno-maxillary fissure. I then cut through the orbital process of the superior maxilla with a strong knife, dividing the superior maxillary nerve at the same time; the nasal process of the superior maxilla was next cut, and then, after drawing the second incisor of the opposite side (for the extent of the disease required it), I cut through the alveolar process and hard palate, as far back as the palatal process of the palate bone, with the bone-nippers; and now all the strong attachments of the tumor being completely severed, I had no difficulty in removing that mass, carefully separating with the knife the palatal plate of the palate bone, so as to preserve the soft palate from injury. The whole of the superior maxillary bone of the left side, part of the alveolar process and palate of the superior maxilla of the opposite side, and also the malar bone of the left side, were involved in the disease.

The tumor weighed four pounds; it was nearly globular in form, having at its inferior surface a deep groove into which the lower jaw sunk, and the teeth before mentioned projecting from its anterior and upper part. In making a section right through its axis it was found to be of a dense fibro-cartilaginous structure surrounded for three-fourths of its entire extent by a pellicle of bone about the thickness of fine parchment, and where the bone was deficient by condensed mucous membrane.

During the whole time of the operation, which took near ten minutes to complete, there was not the slightest need for interference with the carotid artery, or even to place a finger on a spouting vessel; and I should suppose, in all, the patient could not have lost more than from eight to nine ounces of blood; no ligatures were required, and a few minutes after the tumor was removed, all bleeding ceased. Not a particle of the disease could have been left behind, as the tumor came out whole and unbroken, except a small piece which pressed so high up against the floor of the orbit, that I was obliged to cut off when removing the great mass; but this came out immediately after without even having to use the knife for its removal.

I put a few dossils of lint into, and brought the edges of, the wound together with five points of interrupted and three of the twisted sutures. As soon as this part of the operation was finished the patient appeared to us slightly convulsed, and fainted; he was then laid on his back on the floor, but after a few seconds revived again, when he sat up himself, and insisted on being allowed to swallow two or three tumblers of cold water; he was then placed in bed and a dossil of wet lint laid over the wound. I had given him eighty drops of laudanum before the operation, but in about two hours after it, as he complained loudly of pain, I gave him one gr. mur. morphiæ, which set him to sleep after a short time.

9 P. M. Complaining of great pain, but in every respect is getting on satisfactorily; no oozing of blood from the wound, pulse 120, small; slight heat of skin; the wet lint to be kept constantly to the wound.

10th, 6 A. M. Passed a good night, slept several hours and did not complain so much when he awoke as before falling asleep; pulse 100, still very small; heat of skin slightly increased, wound looking well; slight swelling and inflammation of the cheek.

12 o'clock, twenty-four hours after the operation. Complaining of great pain, but the lower part of the wound united by the first intention; to take immediately one gr. mur. morphiæ.

9 P. M. Slept several hours after taking the morphia, and when he awoke felt so much relieved as to insist on being permitted to *smoke the hugga*, which the attendants say he managed very well with the sound side of his mouth; had two healthy stools in the course of the day; heat of skin not so much as it was in the morning; to get 1 gr. mur. morphiæ at eleven o'clock to-night.

11th, 6 A. M. Passed a good night, slept soundly for several hours; wound looking well and nearly all united, swelling of the face increased, heat of skin higher than yesterday, and he complained of pains all over his body: *misturæ sennæ*, one ounce to be taken immediately.

8 P. M. The medicine operated on his bowels three or four times, and he has since been much relieved; has now no fever, and only complains of the soreness of his mouth; ate some sago in the course of the afternoon and found no difficulty in swallowing.

12th. Three days after the operation, wound of face quite healed except in one small point below the external angle of the eye; removed all the pins and sutures, and dressed the part with strips of isinglass plaster.

On the 14th of December, exactly five weeks after the operation, this man

was discharged, perfectly cured, and a likeness of him taken on the day before he left the hospital.

CASE III. *Amputation of the entire lower jaw.* By J. M. Carnochan, M. D., Prof. of Surgery in New York Medical College.

For the first time, as was supposed, this formidable operation, excision of the entire inferior maxillary, with disarticulation of both condyles, was performed by Dr. Carnochan, Surgeon to the New York Emigrants' Hospital, in July, 1851.

This claim on the part of Dr. Carnochan has been denied him, particularly by Prof. Blackman, of Cincinnati; who, in the fourth edition of *Velpeau's Surgery*, by Mott and himself, asserts that McClellan, Stanley, Ganwesky, Heyfelder, Perry, Maisonneuve, Pitha, Cusack, Syme, Ackley, Signoroni, Walther, &c., have each done the same thing.

We regret to find that one so well versed in surgical literature as the author of this article is known to be, *ignores* the deeds of his own countryman, the backwoods Tennessean, Dr. Deaderick, of Athens, formerly of Rogersville, in this State, and gives the credit of the first methodical operation on the lower jaw to Dupuytren, of Paris. Dr. Mott, Mr. South, Dr. Blackman, Dr. Smith, successor to Dr. Gibson, each cheerfully concede priority of this operation to Dr. Deaderick. We are pleased to have it in our power to present a letter, never before published, respecting these claims, from the Doctor himself, and kindly furnished us by our friend, Dr. Avent, of Murfreesboro. The profession will now be able to decide the question: To whom does the honor belong of first operating upon the lower jaw?

(This was addressed to Dr. Avent, Chairman Surgical Committee for Tennessee, 1853.) This is the letter:—

With the exception of the removal of a trivial tumor from the face, the excision of nearly *one-half* of the *inferior maxillary bone* from a lad of about 14 years of age, was my first operation upon the living subject (performed February 6, 1810). The tumor in this case completely and equally surrounded the bone, and fortunately its termination near the chin and angle were plainly defined, and it probably originated from the cavity of a decayed tooth. From the rapid increase of the tumor, which now filled nearly the whole mouth, it was evident that unless relieved the patient would at no distant day succumb, from impeded respiration and deglutition. The parties most concerned (mother and son) being conscious of this, and willing to exonerate me from censure in the event of an unsuccessful issue, *without known precedent or professional counsel or aid* (which at that day was not readily attainable), I forthwith, at my own house, performed the operation in the manner and form described in the *American Medical Recorder* (6th vol., if not mistaken), and *Gibson's Surgery*, to wit: An incision commenced under the zygomatic process, proceeding in the direction of the lower edge of the bone to the chin, another midway at right angles over the tumor and down the neck, integuments separated from the tumor, and the latter from its other connections, and the bone sawed off immediately at the angle, and a few lines from the centre of the chin. Wound closed with sutures and sticking-plasters: a plaster of simple cerate and a light compress over the whole and bandages completed the job. Suffice it to say that in about six weeks the patient had completely recovered, and lived many years in my neighborhood; and two or three years since I was informed of his removal to Kentucky, where probably he is yet living, inasmuch as after the loss of his jawbone he became an uncommonly healthy man. Dr. Mott expressed a somewhat suspicious surprise in consequence of the publication of this case having been so long delayed. Now, sir, the

inclosed letter from my former pupil, Dr. W. W. Lea (at present, I believe, living at Trenton, Western District, Tennessee), was the occasion of my sending a brief statement of the case for insertion in the aforesaid *Recorder*, and had it not been for this letter, in all probability, Dr. Mott and others never would have been disturbed by my pretension to priority respecting the achievement in question.

GRAINGER COUNTY, TENN., Dec. 6, 1822.

MY DEAR SIR: My chief motive for writing to you at present is, to point your attention to some recent publications in the *American Medical Recorder*, on the subject of removing a portion of the lower jawbone. You will there find that Dr. Mott, of New York, has recently performed the operation, and is there spoken of as the first who did it. Now I am well assured that you performed the same operation more than ten years ago, and I distinctly remember having mentioned it to several medical gentlemen in Philadelphia and New York, though perhaps not to Dr. Mott. Should you not feel inclined to contradict these statements of the *Recorder*, I hope you will shortly favor me with a few lines, directed to Nashville, detailing the particulars of the operation. With pleasure, sir, I embrace this opportunity of renewing assurances of my esteem and friendship for yourself and family.

WM. W. LEA.

We add, that Dr. Deaderick still lives to wear his honors meekly which he so gloriously won in his early professional career; this he abandoned, however, years ago—that he was a pupil of the celebrated anatomist, Dr. Wistar, and attended two full courses of lectures in Philadelphia.

From the facts, then, before us, we deduce the following conclusions regarding the history of operations upon the lower jaw:—

1st. Dr. Wm. H. Deaderick, of Tennessee, first exsected a portion of the inferior maxilla. His operation dates the 6th February, 1810, and was for a tumor of the bone in a patient aged fourteen years. He fully recovered.

2d. In 1812, *Dupuytren* performed a similar operation.

3d. It may not be fully decided who was the first to disarticulate the lower jaw. Mr. South says, *Anthony White*, in 1816, removed half a necrosed jaw from the socket. The *Virginia Medical and Surgical Journal* declares the first recorded disarticulation belongs to *Palmi*, who operated in 1820; then *Graffe's* case comes next, in 1821; and *Mott's*, in 1822.

4th. The fullest and most satisfactory account of the complete disarticulation of both sides of the lower jaw is the one about to be noticed. It was performed in 1851, by Dr. Carnochan. This is the case abbreviated:—

CASE IV. *Complete disarticulation of both sides of the lower jaw.* By J. M. Carnochan, M. D.

The patient was a farmer, aged forty-three, had had typhus fever, followed by great swelling in the face, and he complained of pain chiefly in the region of the inferior maxilla. Upon examination this bone was found to be extensively affected with necrosis. Abundant suppuration and great constitutional irritation ensued, and on the 13th July, a consultation on the case resulted in a determination to remove the entire bone. This is the description of the operation performed:—

The patient being seated on a chair, and the assistants properly arranged, an incision was first made, commencing opposite the left condyle, passing downwards towards the angle of the jaw, ranging at about two lines in front of the posterior border of the ramus, and extending thence along the base of the jaw, to terminate by a slight curve on the mesial line, half an inch below the free

margin of the lower lip. The bone was now partially laid bare, by dissecting upwards the tissues of the cheek, and by reflecting downwards, for a short distance, the lower edge of the incision. The tissues forming the floor of the mouth, and situated upon the inner surface of the body of the bone, were separated from their attachments from a point near the mesial line, as far back as the angle of the jaw. The attachments of the buccinator were next divided. The facial artery, the sub-mental and the sub-lingual, already cut, were then secured by ligature. It was now seen that the bone was partially separated at the symphysis, and that the necrosis was complete from that point to the inferior portion of the ramus. The ramus itself was found diseased; the periosteum, externally, was inflamed, and in some parts easily detached. The tongue was now grasped and held forwards, while the attachments of the genio-hyo-glossi muscles were divided. A double ligature was passed through the anterior part of the root of the tongue, and intrusted to an assistant, in order to prevent its retraction upon the superior orifice of the larynx. A fatal case from the falling backwards of the tongue, occurred a few years ago, in the practice of an eminent surgeon of this city; and a similar misfortune should always be guarded against, when the muscular attachments of the tongue to the posterior part of the bone behind the symphysis are divided. A slight force exercised upon the left half of the body of the jaw, broke the connection at the symphysis and at the angle, and this part was easily removed. The next step consisted in the removal of the left ramus. The external surface of the branch of the jaw, and of the temporo-maxillary articulation were exposed, by dissecting the masseter upwards, as far as the zygomatic arch. Seizing the ramus in order to pull the coronoid process downwards below the zygoma, it was found that the temporal muscle was rigidly and permanently retracted. This circumstance presented an unexpected difficulty, which was increased by the unusual development of this apophysis, and by the retraction also of the pterygoid muscles. Passing the forefinger along the inner aspect of the ramus, the situation of the internal and external earotids was sought for and recognized. The insertion of the pterygoideus internus was then felt and cut, grazing the bone in doing so; the lingual nerve, here in close proximity, being carefully avoided. Passing still higher up, the orifice of the dental canal, indicated by an osseous projection, could be felt; and the instrument, still guided by the finger, divided the dental artery and nerve. The knife was thus made to separate the tissues attached to the inner face of the bone, as high up as a point situated about a line below the sigmoid notch, between the condyle and the coronoid process. On a level with this point, at the posterior margin of the ramus, the transverse facial, internal maxillary and temporal arteries form a kind of tripod, the two last named branches of which should not be divided, if possible. It now became necessary to detach the tendon of the temporal muscle. As the coronoid process could not be depressed, I proceeded cautiously, by dividing the lower attachments of the tendon, by means of blunt curved scissors; and by using them and a probe-pointed bistoury, alternately—keeping close to the bone—a considerable portion of the tendon was divided. Deeming it not prudent to use freely a sharp cutting instrument, deep in the temporal fossa, where the coronoid process was situated, I made use of a pair of bone scissors, curved flatwise; and by passing the blades of this instrument over the process, as far as its position would permit, the temporal muscle was detached; a small portion of the apex of the coronoid process being cut through. The ramus, now movable, could be made use of as a lever to aid in the disarticulation of the bone.

In order to effect safely the disarticulation of the condyle, I began by penetrating into the joint, by cutting the ligaments from *before backwards*, and

from *without inwards*. The articulation was thus opened sufficiently to allow the condyle to be completely luxated. Blunt-pointed scissors were now used to cut carefully the internal part of the capsule and the maxillary insertion of the external pterygoid muscle, and by a slow movement of rotation of the ramus upon its axis, the condyle was detached, and the operation was completed on this side. By proceeding to disarticulate by the method here described, injury to the temporal artery, as well as to the internal maxillary, was avoided.

To effect the removal of the other half of the lower jaw, the same incision was made on the opposite side, so as to meet the first on the mesial line. The dissection was also similar; and by disarticulating the second condyle in the same manner as had been observed for the first, I was successful again in avoiding lesion of the temporal and internal maxillary arteries.

The patient fully recovered.

CASE V. Removal of the entire lower jaw; recovery. By James R. Wood, M. D., Surgeon to Bellevue Hospital.

The patient was a German girl, aged sixteen; admitted into the hospital, December, 1855. Her business was packing in a match-factory, and her jaw-bone became diseased from the vapor of phosphorus. It passed to a state of necrosis, and became exceeding painful and annoying to the patient. It was removed according to the following manner, as described in the *New York Journal of Medicine*, May, 1856:—

On the 19th of January, 1856, thirty-three days after her admission, I proceeded to remove a portion of the necrosed bone upon the right side, intending to leave both the symphysis, to which the lingual muscles are attached, and the ramus of the jaw. No anæsthetic was used. The patient was placed on the operating table, with her head and shoulders elevated, and her face turned towards the left side. The external incision commenced midway between the angle and condyle of the right side, and extending along and under the base of the jaw, terminating one quarter of an inch below the symphysis menti. The soft parts were next divided, and the periosteum carefully separated from the bone. A chain saw was then passed under the jaw into the mouth, half an inch to the right of the symphysis, and the bone sawed through. The saw was again passed under the jaw, at its angle, for the purpose of dividing the bone at this point, but, unfortunately, on attempting to work it, the chain broke. I now seized the bone at this point with Liston's forceps, and endeavored to divide it, when it was readily discovered, in this attempt, that the jaw was necrosed to its articulation. I then endeavored, with the forceps, to remove the jaw entire upon the right side, and succeeded, with considerable effort, in completely enucleating it from its periosteal covering.

But little hemorrhage occurred, and no vessel required the ligature. The parts were brought in apposition with sutures, and adhesive strips and cold water dressings applied.

January 20. Pulse 90; no pain; slept well last night.

January 22. Wound dressed for the first time; a small part had united by first intention, the remainder in good condition; no pain.

January 26. Wound entirely healed. An old fistula on the right side, still continues to discharge purulent matter.

While the right side had so greatly improved and apparently left no remnant of the former trouble, the disease was extending upon the left side, involving new portions of the jaw, and giving rise to an immense secretion of intolerably offensive pus. It was, therefore, deemed advisable to attempt the removal of the remaining diseased mass. Accordingly, on the 16th of February, twenty-eight days after the first operation, I removed the remainder of

the jaw. The whole of the opposite side I thought dead or dying. At the symphysis it had almost separated itself from the soft tissues, leaving only slight attachments for the lingual muscles. In removing this side of the jaw I designed to leave that part of the symphysis to which these muscles are attached, partly to avoid the liability of the patient's tongue receding into the larynx, but principally to leave an isthmus which should preserve the contour of the chin, and serve as a point of departure for new bone, which would form from the periosteum, thus far carefully preserved.

The external incision was similar to that of the opposite side, except that it terminated one-half an inch below and to the left of the symphysis, leaving half an inch of healthy tissue between it and the other cicatrix. The soft parts were next divided, and with the periosteum were dissected from the bone, both on its external and internal surfaces, as in the previous operation. An assistant now took hold of the symphysis, and a chain saw was passed under the jaw into the mouth, from half to three-fourths of an inch to the left of the symphysis. My object in sawing through the bone to the left of the mesial line was to prevent the accident previously mentioned; but, unexpectedly, the moment the bone was divided, the central portion left at the chin escaped from its attachments, by simple enucleation, into the hand of the assistant, and the tongue was immediately swallowed. Respiration instantly ceased, and suffocation impended; but, with a pair of strong forceps, the tongue was seized and replaced, and a ligature passed through it, and secured externally. It was now ascertained that that portion of the bone above the angle, was not necrosed, as on the opposite side; but it was decided that the disease could not be arrested, without its entire removal. To complete the operation, the soft parts were separated from the ramus in conjunction with the periosteum, the capsular ligament was opened anteriorly, and a chisel passed over and behind the condyloid process, and by this means the bone was disarticulated. Not a single vessel was tied. The wound was dressed with sutures and adhesive strips. Twenty drops of laudanum were ordered to procure sleep.

February 17. Pulse 112; slept well; wound glued together throughout the whole extent; considerable swelling, but no redness or increase in temperature. Left eyelid oedematous and closed. Wound re-dressed with adhesive strips, and *lotio plumbi et opii* applied.

February 18. Face much swollen; some pain over region of the jaw; pulse, 138, and irritable; wound united more firmly, except about half an inch near an old fistulous opening, which discharges pus and saliva. Four ounces of wine ordered to be given during the day, and the lead and opium wash continued.

February 19. Pulse, 100; pain and swelling greatly diminished. Left eye partially open; continue treatment.

February 20. Pulse, 98; no pain; some oedema of palpebræ. Eye easily opened; wound united by firm adhesions throughout its whole extent; no fistulous openings on left side of the face. Appetite good; diet consists of soups and farinaceous substances; unable to masticate solid food; continue the lead and opium wash.

February 21. Swelling of face nearly subsided; eye open; ligature in tongue removed.

February 23. Swelling entirely subsided. The contour of the face is perfect. All the movements of the tongue, and those pertaining to the jaw, are preserved, such as protrusion of the tongue, lateral motion, deglutition, etc.

From this time until the 4th of March, the patient did well, and everything seemed to favor a permanent and radical cure. On the 4th, she went out on a visit to her friends. She was thinly clad, and suffered from the cold. The

next day, March 5, the left side of her face was swollen, hot, and painful. She had some thirst, a light fur on the tongue, and an accelerated pulse; ordered a cathartic, with lead and opium wash.

March 6. Patient feels much better; all inflammatory symptoms have subsided. Two fistulæ have formed, in the track of the cicatrix, which are discharging healthy pus; ordered a light flaxseed poultice.

March 12. Two small pieces of bone discharged through the fistulous openings.

March 20. Fistulæ entirely closed.

CASE VI. *Removal of a large fibrous tumor from the base of the cranium by excision of portions of the right superior maxillary and palate bones.* By Paul F. Eve, M. D. Southern Medical and Surgical Journal, 1837, vol. i.

Mr. Jonathan Stanford, now twenty-one years old, states that from early life he could not breathe through his right nostril. After having applied to several physicians of his neighborhood, and tried everything that promised relief, he was induced to visit the Faculty of our Medical College, in April, 1835. A few days after his arrival, an attempt was made to remove the portions of a polypus projecting anteriorly into the naris of the right side, as well as posteriorly and downwards upon the soft palate, which latter portion could be readily felt by the finger introduced into the mouth and passed upwards alongside the uvula. By the use of forceps, etc., some inconsiderable portions were torn away, which permitted the patient to breathe through the nostril affected, after the slight inflammation produced by the operation had subsided. The part of the tumor directed backwards was found to be very large, and from the difficulty experienced in seizing it properly, it was deemed inexpedient to proceed further with the operation at that time, and the patient returned home.

In October following, about six months after this very partial relief was afforded, Mr. Stanford again visited us, having now the antrum Highmoreanum of the right side very much distended, the eye of the same side being somewhat protruded, turned upwards and outwards, and the molar teeth depressed below their natural level, the polypus also projecting both anteriorly and posteriorly in the nostril of the affected side. In the presence of the class then attending lectures, an opening was made into the antrum, and a portion of the polypus extracted from it. The soft palate was next slit up for about three-fourths of an inch, and as the united efforts of several could not draw away that part of the tumor directed backwards, either with forceps, ligatures or hooks, a considerable portion was removed with curved scissors. In a few days, our patient had sufficiently recovered to return home, the distance of about thirty-five miles.

About six months after this, Mr. Stanford again visited Augusta. A large tumor now protruded out of the antrum under the cheek, producing great deformity; he had had an attack of congestive apoplexy; the sense of hearing on the right side was diminished; the carotid artery of the same side was pushed outwards from its natural situation; and both nostrils were closed up, the patient breathing through the mouth. Mr. S. and his friends having been apprised of the nature and extent of the operation required for the removal of his affliction, and being persuaded from experience that nothing less promised relief or even a continuance of life itself, gave their consent to submit to whatever was thought necessary.

On the 19th of May, assisted by Dr. Dugas and Messrs. Alfriend, Roberts and Byrd, Students of Medicine, the operation was commenced by making an incision from one inch below the internal angle of the right eye, and extend-

ing down through the upper lip. The knife was then carried from the angle of the mouth on the same side upwards and backwards to the lower edge of the malar bone, dividing all the soft parts for two inches or more. The flap made between the two incisions was dissected up and reflected upon the right eye. The tumor projecting from the antrum being thus fairly exposed, a very strong tape, as a ligature, was put around it in this cavity, and by very severe and forcible traction a large piece of it was torn off from the mass in the nostril. The hemorrhage was very great; but in this, as in all other instances, except a few small arteries in the lip, which required compression, it was controlled by injections of a strong solution of sulphate of zinc. Finding it now impracticable to seize the polypus either through the opening already made, the nostril or the mouth, a peculiar instrument was resorted to, with which it was proposed to cut away the bones. With a small pair of pruning shears, the superior maxillary bone of the right side was divided between the first and second incisor teeth, then the nasal process of the same bone transversely by passing one blade of the same instrument into the antrum, after which the alveolar process with six teeth (the wisdom tooth not being developed), was gradually detached from the malar bone and the pterygoid process of the sphenoid bone. The palatine process of the superior maxillary bone, and the palatine plate of the palate bone, were now removed, and the soft palate completely divided through the centre. It being evident from repeated efforts with forceps, ligatures and hooks, that the polypus could not even now be dragged away, after separating its slighter attachments from the surrounding parts, the curved scissors were employed, and it was found intimately adhering to the basilar processes of the occipital and sphenoid bones, and also to the internal plate of the pterygoid process.

The polypus was of a very irregular shape, having several projections; one into each nostril, the large one into the right antrum, which had been torn off, besides the large body resting upon the soft palate and attached as already mentioned; and what was very remarkable, there was a small nipple-like process extending into the left antrum. It was filled with large venous sinuses, and was quite fibrous, particularly at its bony attachments. It was about the size of a man's fist; after being macerated ten or twelve days, and deprived of all its blood, it weighed three ounces, three and a half drachms. It can be seen in the Museum of our College.

In dressing the wound, three common interrupted sutures were made in the soft palate, and five more with adhesive strips to the two incisions on the face.

The patient, who bore the operation with great fortitude and resignation, fainted several times, and did not fully revive until the third day, when he was considered out of danger. A little more than three weeks after the operation he returned home; the external incisions had healed, but that in the palate was still open. There was little or no deformity; the right cheek was neither depressed nor swollen. It is proposed to attempt hereafter, the operation of Roux, called staphyloraphy, to remedy the defect in the soft palate.

Augusta, Georgia, June 7, 1836.

NASHVILLE, TENNESSEE, June, 1856.—It gives me great pleasure to state that I have just heard Mr. Stanford enjoys good health at this time, and lives, I believe, near the Etowah River, not far from Catersville, Georgia.

CASE VII. *Fracture of the hyoid and inferior maxillary bones, etc.; tracheotomy, etc.; recovery.* By A. F. Sawyer, M. D., of San Francisco, California. *American Journal of Medical Sciences*, 1856, vol. xxxi.

A vigorous, muscular man was at work, July 15, 1854, on a piling machine, which was carelessly overturned while he was near the top, and he fell with

it to the ground, a distance of forty-five feet. The iron hammer of the machine, weighing one thousand pounds, was at the time elevated, which, of course, precipitated his descent with the most fearful violence. I saw the patient a few minutes after his fall, and on examination, found that he had received the following injuries: The body of the lower jaw on the right side, near the symphysis, was extensively comminuted; a large triangular fragment of the maxilla was projecting through a lacerated wound of the integument externally and beneath. A piece of bone above, containing the right canine, and adjoining incisor teeth, was lost at the time the accident occurred. The left angle of the jaw was also fractured, but the separation of the fragments was incomplete. The extensive bruising of the left side of the head and trunk, indicated that the force of the blow had been received on this part of the body, and as far as the maxilla was concerned, was transmitted to the opposite side, where the comminution existed, on the principle of the arch. The face was frightfully distorted, the chin being greatly displaced to the right side. The cartilages of the larynx were fractured and separated, the right over-riding its fellow. On the left side, the great cornu of the os hyoides could be felt loose and detached from the body of the bone. The neck was much infiltrated with air and serum, and subcutaneous crackling was indicated to the touch over the upper portion of the chest and back. The right radius was broken transversely about three-quarters of an inch above the wrist, the lower fragment being split longitudinally into the cavity of the joint itself. The left patella was much comminuted, the detached fragments of which could be felt and moved about, beneath the integument.

The patient was found in a state of great prostration, laboring under the usual signs of concussion of the brain. He could be partially aroused by loud shouting in his ear, or on manipulation about the fractures. Pupils dilated, sluggish to the stimulus of light; respiration slow and measured, without noise; skin bathed with a cold moisture; pulse feeble, cannot be counted. I had him well covered with blankets, external heat constantly applied, and diffusible stimulants, as brandy and ammonia, administered *pro re nata*.

In the course of two hours reaction began to be established, when the patient was transferred to a comfortable bed, and his fractures dressed. Several loose fragments of the maxilla were removed through the external wound, the edges of which were afterwards brought together, cold dressings applied, and retained in place by a figure of 8 bandage over the cranium. The fracture of the radius was treated with simple straight splints; the left lower extremity was flexed on the pelvis, at an angle of thirty degrees, and supported in this position by an inclined plane.

Stimulants ordered through the night, and evaporating lotions for the neck, knee-joint, and the various ecchymosed portions of the body.

July 16. Passed a restless night; at times delirious, and inclined to strip off his dressings, followed by periods of heavy slumber; now, when aroused, talks incoherently; surface of the body cool; pupils unequal; head flushed; passes his urine copiously in bed; pulse 110, soft and feeble. Ordered black draught internally, to be followed by a turpentine enema; ice to the head, and blisters to the inner aspect of the thighs.

17th. General symptoms of traumatic delirium; respiration inclined to be stridulous; voice husky, and deglutition extremely difficult; bowels well evacuated by medicine; extremities quite cold. Repeat the stimulating enema; mustard to the extremities; injections of warm beef-tea.

18th. Patient passed a more quiet night; less congestion of the head; skin moist and warm. He appears rational this A. M., although evincing

great prostration physically; wound of the jaw suppurating; patient swallows with more ease; pulse 96, full and soft.

19th. Rested well during the night; takes beef-tea by the mouth without difficulty, and with a relish; respiration and voice unchanged; effusion into the knee-joint subsiding. The joint is without much heat or tenderness, and patient makes no complaint of it. Great difficulty is experienced in keeping the fragments of the jaw in coaptation, on account of the comminution of the bone, with its loss of substance, and the frequent change of dressings rendered necessary by the profuse purulent discharge. A mould of the outline of the jaw externally was taken in plaster, and of the alveolar margin of the jaw with wax. Thin metallic plates were struck up from these moulds, which were accurately adjusted to the maxilla, the external one being cut away, at the site of the wound, to allow of the free escape of the pus. The lower jaw was then brought firmly against the upper, and made secure by appropriate dressings. The patient has some febrile disturbance; tongue marked with a white dry centre; pulse 96, with a strong impulse; ordered gruel. R.—Infus. sennæ \mathfrak{z} iv; sulph. magnes. \mathfrak{z} ss. M. ft. haustus.—Pul. Doveri gr. x. Hora somni sumend.

20th, 8 A. M. Respiration was somewhat embarrassed during the night; now, however, less dyspnoea than during the previous twelve hours; breathing apparently goes on without serious effort. Tumefaction of the neck was much increased, swallows without pain, and craves food; tongue moist; skin of natural temperature; pulse 90, soft and full. Ordered hirud. vj to be applied on each side of the neck, to be followed by fomentations of hot water and spirit.

2 P. M. It was reported to me that the breathing of the patient had become extremely labored. On arrival I found him in the last stage of asphyxia; countenance purple; eyeballs projecting; veins turgid, like whipcords; inarticulate; nearly insensible; respiration not more than three or four times a minute, and patient evidently in his death-throes. Without loss of time the head was thrown backwards, to expose the anterior cervical region; an incision was made downward along the median line of the larynx about two inches in length, with the intention of opening the crico-thyroid membrane. The serious injuries inflicted on the laryngeal textures, as revealed in the progress of the dissection convinced me that laryngotomy could not be safely relied upon. The original incision was continued along the median line of the neck to the top of the sternum, the trachea soon exposed, and the fourth and fifth rings divided by a longitudinal cut. The trachea occupied a deep and formidable position, as the patient had a thick muscular neck, which was also enormously tumefied as far as the thorax, from the effusion of serum, and the escape of air from the fractured larynx into the intermuscular cellular tissue. The patient had ceased to breathe before the trachea was opened. The abundant venous hemorrhage gave considerable annoyance, and I was left entirely without assistance, the nurses being occupied in controlling the wild excitement of a brother of the patient, who, not understanding the purport of the operation, had violently attempted to interfere with it. A quill, which was fortunately at hand, was passed into the trachea, and the wound stuffed with sponge to restrain the oozing. The lungs were then inflated by applying the mouth to the quill. By alternating the inflation by pressure and friction over the chest, by the use of the cold douche, etc., soon satisfactory indications of returning animation and consciousness were obtained. On the first respiratory efforts the quill was removed, and the edges of the tracheal aperture kept asunder as widely as possible, to allow a more perfect ingress and egress of air. A tracheotomy tube was inserted into the trachea as soon as obtained, and tranquil breathing finally restored. About \mathfrak{z} ss of coagulum and mucus was

expelled through the wound and tube. After all hemorrhage had ceased, the upper part of the wound was brought together with the interrupted suture, and the patient left in a comfortable condition. 9 P. M. Respiration free through the tube; patient makes no complaint; chicken-tea allowed. R.—Spts. nit. eth. ℥j; tr. opii gtt. x; mist. camph. ℥ss. Hora quaque capiat donec somnis fuerit.

21st. Patient slept quietly during the latter part of the night; less tumefaction of the neck; respiration goes on entirely through the tube and the wound. Ordered beef-tea and porter, mucilaginous drinks. R.—Sul. morph. gr. $\frac{1}{2}$; mist. camph. ℥ss. Hora decubitus.

24th. Swelling of the neck rapidly passing away; a deep-seated hardness about the larynx and the upper portion of the trachea, resulting from the deposit of lymph. Patient has much improved in strength; increased inflammatory excitement about the jaw, without active constitutional symptoms; a clear mucous expectoration through the tube without effort. The dysphagia resulting from the operation has nearly subsided; pulse 85, soft and regular. Ordered a simple enema; asks for and may have a yelk of an egg and calves'-foot jelly.

We have not space for the details of this interesting case. It certainly was a most embarrassing and trying one, reflecting, too, great credit for its skilful management. In about a year the general health of the patient was restored.

SECTION VI.

AFFECTIONS OF THE EAR.

CASE I. *Larvæ of the common fly in the ear.* Lanect, 1849.

Dr. Routh exhibited to the Society two small maggots, which had come out of the ear of a gentleman. This gentleman held the office of Superintendent in some gold mines in Brazil. Being engaged on a Thursday in October, 1846, in reading, he was tormented by a fly, at which he struck with the palm of his hand, and accidentally pushed it within the meatus auditorius. He was not able to extract it till four or five minutes after, when his daughter succeeded in doing so by means of a small forceps. The fly came out entire, excepting one leg, and alive, and was seen by every member of the family, and recognized to be a *musca carnaria*, or flesh-fly. On the same evening he began to feel an uneasy sensation in his ear, which went on from bad to worse, until the internal ear became exceedingly painful. The sensation was as if there was something like a gnawing or rasping of the drum. The natives around him stated that maggots had been found in the ear. An English medical gentleman was sent for, who ordered a few drops of a solution of opium in dilute nitric acid, to be instilled in the ear. The pain and gnawing, however, were in no way relieved. On the Saturday, at four P. M., he was seized with a convulsion; he moaned terribly, plunged his head in his pillow, bending forcibly the joints, and rolling the eyes; the general character, however, of the spasmodic movements was clonic; the convulsion lasted from seven to ten minutes. The medical gentleman called the same evening with a forceps, extracted a living maggot, and ordered a weak solution of bichloride of mercury to be applied within the ear. The rasping gnawing and pain continued. At eleven P. M., the same evening, another convulsion occurring, further medical aid was called in, and on consultation, it was agreed to apply white precipitate suspended in milk to the ear. This was done, and somewhat relieved the pain; soon after, two other maggots came out alive. On the Sunday morning another convulsion occurred, but much less violent; the same day a fourth

maggot dropped out, also alive. From this time, all the acute pain subsided, but slowly at first, as a purulent discharge continued to flow from the ear, but which at last yielded to injections and counter-irritants. The patient finally recovered in about six weeks, but had remained deaf in that ear ever since. The case related was very interesting: 1st, as showing the short space of time in which the ova were deposited, the fly not having remained in the ear more than five minutes; 2d, as showing the rapidity in which they were hatched in the ear; 3d, as exemplifying the non-poisonous quality of the eerumen to maggots of musca; and, lastly, as indicating the danger of delay, and the efficacy of white precipitate as a means of cure. Two cases only were recorded in *Cooper's Surgical Dictionary*, in one of which convulsions also were present, but in neither was the history of the first deposition of the ova given, which in this case was distinctly traced to a *musea earuaria*.

CASE II. *Melted lead extracted from the ear.* By John B. Bowers, M. D., of Barnwell District, South Carolina. *Southern Med. and Surg. Journ.*, 1847.

Extraction of a piece of lead from the ear.—We have received from John B. Bowers, M. D., of Barnwell, S. C., a piece of lead which he extracted from the ear of a negro man. The general appearance of the metal shows very clearly that it must have been poured into the ear while in a melted state. Dr. B. says: "A negro man came to me to do something for him, saying that his wife had attempted to kill him by pouring melted lead into his ear, he being intoxicated at the time when she committed the act. I paid no attention to his story, supposing he was mistaken. I frequently saw him afterwards, and he always would say that if I did not take the lead from his ear that it would kill him. His master consulted me on the subject, but I told him that it was only an idle tale of the negro. Fifteen months after, the ear became so painful that his master requested me to examine and see if there was anything in it. On laying him on his side, so that the sun shone in his ear, I discovered the metal, which was extracted with considerable difficulty. The pain ceased immediately on the removal, but he cannot hear as well in that ear as in the other."

CASE III. *Discharge of a tooth from the ear.* By Mervin Coates. *Lancet*, 1847.

The following curious case happened in my practice. At the time of its occurrence I resided in the Isle of Wight. In the summer of 1846, being myself absent from home, a friend was called upon to attend an old, poor man, who had suffered for some days from severe pain over the whole of one side of the face and head, but more intensely still about the ear. He found him feverish, in great pain, and incapable of opening his mouth; the pinna and skin lining the external meatus, were highly inflamed and swollen. Warm fomentations, poultices, and purgatives, were ordered. Two days afterwards I paid him a visit. He was then in great pain, and, otherwise, much in the same state as I have already described, but, in addition, there was an oozing of pus from the meatus, and almost entire closure of that passage by a whitish substance, which the patient conjectured to be a piece of onion, introduced there by the recommendation of some old woman, but which the probe detected to be bony. The patient declining to have this removed, he was recommended to continue to foment and poultice. That same night a fit of sneezing forced out the piece of bone felt by the probe, which proved to be one of the wisdom teeth of the upper jaw; after that the man got well.

CASE IV. *A prick with a needle in the ear, causing death.* Lancet, 1829, vol. xvi.

Carlo Bruni, a healthy man, 20 years of age, was pricked in the left ear by a needle, which entered directly into the meatus; he screamed out, and fell down senseless. He was immediately bled and well purged, and, after the venesection, somewhat recovered his senses, but remained delirious for three days, after which time he was carried to the clinic of M. Speranza. The auditory canal exhibited no traces of any injury, nor was there any discharge; the patient was pale, lethargic, and often moved his hand towards his head; he was repeatedly seized with convulsions of the whole body, but especially of the left side of the face; respiration was stertorous, and the pulsation of the heart very slow; he died on the fourth day after the accident. On examination, the membrana tympani was found lacerated; the cavitas tympani filled with pus; the auditory bones were displaced, and not adherent to one another, nor to the parietes of the tympanum; the stapes could not be found; the membrana fenestræ ovalis was lacerated; the chorda tympani was torn; the vessels of the membrane of the semicircular canals, cochlea, and vestibule were much injected, and the nerve contained in them completely disorganized; in the vestibule, two fragments of the stapes, its base and one of the branches, were found. The arachnoid exhibited evident signs of previous inflammation; the pia mater was covered with a sero-purulent fluid; the cortical substance of the brain was very vascular and firm; the portion of the brain, in contact with the temporal bone, filled with blood, of which also a considerable quantity was extravasated between the dura mater and the petrous bone.

CASE V. *Severe symptoms from a pin in the ear.* Lancet, 1839, vol. xxxvii.

Margaret Duff, æt. 18, was admitted January 28, 1839. About a year ago, while picking her ear with a pin, she inadvertently allowed the pin to slip into the ear. Till lately she has not suffered much inconvenience from the accident, but now the pain is very distressing, and she is most anxious to have it taken out.

The ear was minutely examined and re-examined by the aid of bright metallic tubes, to throw the light into the bottom of the meatus, but not a vestige of the pin could be seen. A small speck, to be sure, was seen, but it was doubtful whether it was not a glistening point of the membrana tympani; and, in this state of uncertainty, although an attempt was made to lay hold of it, the attempt was not persevered in. Fomentations, opiates, the occasional application of leeches, as circumstances might require, were the only means that could be thought of to allay the pain, as the removal of the pin appeared impracticable.

April 30. The ear has been examined from time to time since her admission, but it was only to-day that the head of the pin could be seen; it was laid hold of by a small forceps, but it came out without the body. The ear was then washed out with warm water, but it was impossible to get a view of the body of the pin. The pain of late is so intensely severe that the patient is almost constantly moaning and screaming out. She seldom sleeps, and opiates have little effect in procuring rest or even affording any relief, although she takes to the extent of two drachms of the sedative liquor in the course of the day. For the last few days she has voided no urine without the catheter.

May 28. The pin made its appearance at the external ear to-day, and was removed; she now feels quite relieved from pain. She required the catheter till yesterday.

It is evident that the pin had penetrated the membrana tympani, and had advanced as far as its head would permit. I think the head must have fallen off from the body, and been lying at the bottom of the meatus when I laid hold of it with the forceps. It is remarkable that the long-continued and intense irritation which it kept up did not occasion suppuration in the ear.

—The pin was, in all probability, introduced into the ear head first; and if so, could not have penetrated the tympanum, as the reporter of the case supposes.

CASE VI. *Sudden restoration of hearing after a deafness of twenty-three years' duration.* By A. H. Thompson, M. D., of Walden, New York. Boston Med. and Surg. Journal, 1855.

Miss F——, æt. 23, when about two years old introduced a bean in the right ear, and from inability to extract it, the substance was allowed to remain there for some months. It was at last removed in small pieces, with a darning-needle, leaving the passage very much abraded, from which blood freely flowed. The external meatus became in a short time completely closed, by the supposed agglutination of its walls, the function of the ear becoming *entirely* suspended. She was not able to hear the loudest sounds when the *left* ear was closed. About ten months since, she came under my charge, with otorrhœa affecting the *left* ear, accompanied by a considerable amount of cerebral disturbance. She being of a decided plethoric habit, I adopted the most vigorous antiphlogistic measures—venesection, purging, leeching, &c.—and after the acute stage, blisters with sarsaparilla and iodide of potassium. The membrana tympani is covered by fungous granulations, to which I am applying nitrate of silver. In this condition of things she could be made to hear only by the greatest effort—the right ear, as I have said, being useless. About three weeks after I saw her, she removed from the *right* ear a hard, black-looking substance, with a pair of tweezers, and found to her surprise, that the passage, which had been closed for twenty-one years, was completely open. I saw her the next day, and she was anxious to know if she would be able to hear with that ear. I prophesied that its function *might* be partially but gradually restored. Her ear remained in this condition about four weeks (she hearing no better than when it was closed), until last Friday evening, when she experienced a very curious sensation in the right side of her head—feeling, as she described it, “as though her brain was being wound up.” She was unable to speak, and quite sick at her stomach. Soon she felt “as though her brain was unwinding,” accompanied by noises like the “firing of artillery;” and when the process appeared to be completed (a space of about one minute), she could hear perfectly with the right ear. She was very much agitated and alarmed, as you may readily suppose. She can now hear ordinary conversation as well as any one with but one sound ear. Loud noises are, however, somewhat painful.

Can any of your readers give an explanation of the case—or is it one of those phenomena beyond human ken? My youth and want of experience prevent my hazarding an opinion.

CHAPTER IV.

THE NECK.

SECTION I.

TUMORS OF THE NECK.

CASE I. *Removal of an immense fibrous tumor from the neck.* By M. Maisonneuve, Surgeon to Cochin Hospital, Paris. Translated by Dr. Case, for the St. Louis Med. and Surg. Journal, 1855.

I propose to report a case of a large tumor, which, from its size, situation and other circumstances, render it one of unusual interest.

A female, aged thirty-five years, presented herself in the wards of M. Maisonneuve, with a large tumor developed in the median and left portion of the neck and producing from its size considerable deformity, as well as much inconvenience and difficulty in respiration and deglutition from its pressing on the trachea and cesophagus.

She arrived in Paris in the month of May, 1854, and consulted several most eminent surgeons, all of whom pronounced her case hopeless. After remaining six weeks at *La Clinique*, under the care of M. Nélaton, where she prayed in vain for an operation, she was on the eve of returning to her home to spend the few remaining days of her then miserable existence, for the tumor was gradually increasing. At this time, she was advised to consult M. Maisonneuve, who for boldness and indefatigableness is widely known. She did so on the 18th of June, two days before the operation, and demanded the extirpation of the tumor.

From the size of the tumor, its situation being in intimate relation with the carotid artery, jugular vein, and cervical plexus of nerves, as well as having heard the expressed opinions of others, Mr. M. also hesitated, but the patient insisting, he concluded to operate. He informed his class and others present, that he believed it to be a fibrous tumor, having its origin in or being attached to the periosteum of the cervical vertebræ. That its connections with the large bloodvessels and nerves, he could not tell, but believed they were pushed either in front or behind the tumor. She had first noticed it a little less than three years ago, when from its small size it occasioned little inconvenience, but now was, at times, quite painful.

Mr. M. considered himself justified in operating from the following reasons: Firstly, that she could not live long with the tumor. Secondly, were he affected similarly he should desire its removal; and thirdly, her urgent solicitations for its extirpation.

The operation consisted in making an incision from a point just posterior to the external portion of the clavicle to within a little less than an inch of the ear. From this two other incisions were made after a slight dissection, one extending to the anterior median line of the neck, and the other nearly to the posterior, so that its form was crucial. The dissection now commenced, and after the tumor was laid bare and partially isolated he divided it in two, and removing the inferior half first, divided the remaining half and then re-

moved these parts. The arteries, veins and nerves, were isolated and carefully pushed aside and protected.

Thirty-five minutes elapsed from the time the knife entered the skin in making the first incision until the operation was finished; quite a short time, when we consider how firm were the attachments and the magnitude of the tumor. During this time but very little hemorrhage took place, only one artery requiring attention, and torsion sufficed for it. It became necessary during the operation to make use of very forcible traction by means of *erignes*, and the dissection was necessarily done mostly by the fingers. Mr. M. remarked before commencing, that it was "an operation where one embarks, not knowing what he will meet, or where he will disembark, and in which every possible precaution becomes necessary."

Upon examination of the tumor, Mr. M. verified his diagnosis. It was found quite large, measuring in its diameter about four or five inches. One portion was marked with a concavity, corresponding to the anterior portion of the vertebræ with which it was in contact. The external face was slightly convex and presented also a slight depression or concavity which received the carotid artery, internal jugular vein and pneumogastric nerve.

Of course an immense cavity was left after the tumor was removed, in which could be seen part of the cervical vertebræ, the cervical and brachial plexus of nerves, the œsophagus, the larynx, the trachea, the carotid artery, the internal jugular vein, and pneumogastric nerve. The flaps were brought together by means of *serres-fines* and adhesive plaster, and the wound dressed as in ordinary cases.

She was completely under the influence of chloroform during the operation; and several times was on the eve of syncope, requiring most active interference to prevent it.

June 27th, the general health of the patient is good, the wound is healthy, although still deep and suppurating considerably. Two or three weeks longer sufficed to procure complete union and a return of the organs concerned to their normal situation.

Remarks.—It was by this method the tumor was removed, which consists simply in removing piece by piece. The French attach great importance to this method, and already M. Maisonneuve and Chassaignac are quarrelling for the honor of priority. They contend that it is peculiarly applicable to fibrous tumors of the uterus, and congratulate themselves upon the possession of a method, "that has enabled tumors to be successfully removed, which had been pronounced by the most skilful surgeons incurable."

CASE II. *Tumor weighing nearly twelve pounds successfully removed from the neck.* By P. C. Spencer, M. D., of Petersburg, Virginia. New Orleans Med. Journal, 1844, vol. i.

Thomas Wilkinson, a native of the neighboring county of Sussex, thirty-seven years of age, placed himself under my care at the beginning of the present year, for the surgical treatment of an enormous tumor of the neck.

The history of the case, collected from the accounts given by himself and friends, is as follows: The tumor had been in existence thirty years. It was described as being located, when first observed, at the angle of the lower jaw, and beneath the lobe of the left ear. Its presence and growth being wholly unattended by pain or annoyance of any kind, it does not seem to have created anxiety, or to have attracted much notice during the period of his youth.

This apathy, however, was not of long duration. Before he had reached his 20th year, its great size, and the deformity and annoyance it occasioned,

led him earnestly to desire relief. It was then sixteen or eighteen years before the time of his application to me, that he for the first time sought surgical advice and assistance. The tumor was at that time represented as being double the size of a large orange, and *firmly imbedded beneath the angle of the lower jaw*. He was immediately placed under the treatment necessary to prepare him for its excision, by a distinguished and very bold surgeon of this place, since deceased. When, however, the day fixed for the operation arrived, he was, much to his disappointment and chagrin, dismissed without it; the surgeon giving as a reason for the postponement, that he had not been able to prepare himself with some necessary preliminary. Wilkinson was desired to return home, with the assurance that so soon as this could be accomplished, he should be sent for. This promise was never fulfilled. Whatever may have led to the postponement on the part of the surgeon, the impression was created on the minds of the patient and his friends, that the operation required, was deemed one of a nature too hazardous to be attempted with any prospect of success. This impression was subsequently confirmed as the case wore on, since the many medical men, who from time to time got sight of the disease, as the man's business called him from place to place, volunteered the almost unanimous opinion, that the safe removal of the tumor was beyond the reach of art. With this conviction, the man patiently resigned himself to his fate, awaiting the issue. But the disease did not remain idle; mass after mass of the degenerate structure continued to shoot out from every side. Reaching downwards, it touched the shoulder, the whole breadth of which it proceeded to occupy, and then on both breast and back it ultimately fell in large folds. Finally its great weight, acting upon a frame already worn down and emaciated by the ceaseless irritation of its presence, precluded all employment, allowing him to remain in an erect posture for a short period only, and then at long intervals. In addition to all this, decay ultimately set up in the morbid mass; patches of ulceration appeared on its periphery, resulting apparently from imperfect nutrition, caused either by pressure, or lesion of its nutritive vessels; abscesses formed in its interior, tunneling it with huge sinuses, which constantly discharged offensive matter; and hectic fever supervened. Feeling that he could live but a short time as he was, and being convinced that the excision of the tumor afforded him the only chance for his life, the patient had arrived in town with the determination to have the operation attempted.

After a minute and tedious examination of his case, with several professional friends to assist me, we found it almost impossible to come at anything like a positive opinion, as it regarded the safety or practicability of an operation. This ambiguity and embarrassment arose from the exceeding difficulty of ascertaining correctly the parts involved in the attachment of the tumor, and in defining the nature of the operation required for its removal. Firmly attached by a strong and unyielding band to the whole side of the neck, its sides shelved over all around, below, behind and before, wholly precluding anything like a satisfactory examination, since there was but a narrow space for the hand to pass under, to effect the exploration. Nor was this all. Admitting that a free examination of the attachments of the tumor could have been made, its immobility on its stem, and the extent of these attachments were so great, that nothing positive could have been ascertained of the parts involved, likely to be wounded in an operation. Nothing is easier than to prove this, by a glance at the bounds of its attaching surface. Extending from an inch above and behind the lobe of the left ear, these ran posteriorly on a line with the sterno-cleido-mastoid muscle (which it covered with the

great vessels of the neck), down to within an inch of the clavicle. In front, its connection ran from the ear over the cheek to a point midway below the chin, where it passed again downwards in a line with the trachea, to the top of the sternum. The whole formed a triangular connection or band, firm and almost immovable, at least six inches through in its longest line. It was a prominent question in the inquiry, whether there would be danger or probability of wounding either of the great vessels of the neck. This result under ordinary circumstances would not have been feared by the surgeon; but in the present case, the accident could but be fatal, for the very plain reason, that the courses of these vessels, in their entire extent, was so completely covered by the diseased mass, which was so unyielding and immovable as to preclude entirely, the possibility of securing them by ligature or other means.

After being made fully sensible of these difficulties, the patient still persisted in his determination, and the operation was therefore undertaken as a dernier resort.

It was necessary to place him on a more generous diet than he had lately allowed himself, in order to insure him sufficient strength for the trial. Some eight or ten days sufficed for this result, and on the 9th of January, 1844, the operation was performed. A narrow table was provided, in a room tolerably well lighted, on which the patient was placed, lying on his right side, with his head elevated. Whilst in this position, in the presence, and with the assistance, of Drs. J. F. Peebles, Jones and Michie, all of Petersburg, I proceeded to operate.

My first design was to raise the tumor from behind by cutting it away from the whole line of its posterior attachments, freeing it thereby from the great vessels of the neck, as early as possible. For this purpose an incision was commenced about two inches below the ear and carried on down the tumor to within half an inch of the clavicle. The skin was carefully, but with great difficulty (so closely was it agglutinated to the diseased mass), dissected off to the neck. When this was completed, I cautiously proceeded to divide the adhering bands which had been exposed by the incision. The sterno-cleido-mastoid muscle attenuated to a mere filament, had been partly brought into view, and being closely affiliated with the diseased mass, was divided across above the point where it was decussated by the omo-hyoideus. When by these means its lower part had been freed so that the tumor could be raised, the carotid artery was plainly seen beating in front of the line of the original incision, but now about an inch backwards from its still adhering surface. The tumor was next raised and borne slightly forward, when the dissection was carried on without danger of wounding the vessel.

The very strong and firm adhering bands which connected the excrescence with the mastoid process of the temporal bone, the tuberosity of the occiput, and the transverse processes of the upper cervical vertebræ were next severed in the order in which they presented themselves. Up to this time no vessel of any importance had been wounded, the hemorrhage had been slight; the only embarrassment to the operator arising from the unpleasant strangulation resulting from the pressure of the tumor on the trachea as the patient lay, through the unavoidable manipulations on it already described. Starting under the ear at the origin of the first, another incision was next extended through the skin down to the tumor, across the cheek to the chin, and then carried downwards on a line with the trachea, finally terminating at the first, just above the clavicle. Much time was next required in removing the adhering skin from the surface of the tumor, which was carefully done through the whole line of the incision, that it might serve as a covering to the wound,

and many considerable vessels were wounded, two of which, one near the angle of the inferior maxillary bone, the other beneath its symphysis, requiring the prompt application of the ligature. When this tedious and exceedingly painful dissection was completed, the exhaustion of the patient was so great that I was forced to suspend my dissection about the throat, in order that he might be allowed to breathe with necessary freedom.

But all its adhering bands had been severed, and the tumor could be raised, and so soon as the patient recovered from his partial syncope, its final excision was readily completed.

Though overcome and greatly exhausted, the patient was found, upon examination, to be in quite a favorable condition; his pulse was good, and he had not suffered so much from hemorrhage as had been expected; the principal loss being, in fact, venous blood. A reasonable time having elapsed, and there being still little or no decrease of the oozing from the divided veins, a weak solution of creasote was applied to the wound; it had the desired effect almost immediately, and I proceeded to the dressing. The flaps of the skin which had been left, covered the wound very well, considering that the nature of the case, leaving no choice in the matter, had obliged us to dissect without regard to this object; and having carefully brought them together, they were secured and the wound closed by strips of adhesive plaster.

The dressings were completed, and patient placed in bed in forty minutes from the time the operation commenced. No accident occurred, and the night succeeding the operation was spent quietly and comfortably. On the second day there was a slight rise of fever, which was at once successfully combated by a light purgative.

It is considered entirely unnecessary to detail further the progress of the case; for after this time no constitutional symptom arose, and its management became entirely a local affair.

The improvement of the general health proceeded *pari passu* with the healing of the wound, which under the simplest treatment, was gradual yet progressive. On the 23d of January he left his bed entirely, and late in February he returned home in good health, and so altered in appearance that his nearest neighbors did not at once recognize him.

He has been seen within a few weeks by the writer, and he reported that the improvement of his general health had steadily progressed since his return home.

The tumor weighed within a fraction of twelve pounds. It evidently belonged to the class of non-malignant tumors.

SECTION II.

CUT THROAT.

CASE I. *Almost spontaneous recovery after complete division of the trachea and œsophagus.* Graefe and Walther's Journal—Lancet, 1830, vol. xvii.

Ch. Schnorr, ætat. 37, of a truly athletic constitution, was, on the 17th of February, 1827, brought to the Hospital of the University of Kiel, two hours after having made an attempt to commit suicide by cutting his throat. There was a large wound in the neck (three inches in width and six inches in length), by which the trachea, between the first and the second ring, and the œsophagus, had been completely divided. None of the large nerves or bloodvessels had been wounded, which was only to be accounted for by the wound having been made by a curved knife, which had been inserted at the side of the trachea,

and carried from behind forwards. The patient was very pale, and of course speechless; he lay on the abdomen, in which posture only he could breathe; and every attempt at getting him up, as well as the introduction of an elastic tube into the lower aperture of the œsophagus, brought on a violent fit of dyspnœa and vomiting: some warm milk was instilled into his mouth, and though it immediately escaped through the wound of the œsophagus, and caused a violent cough, it quenched the thirst by which the patient was tormented, as he expressed by signs. At the same time, fifteen drops of tincture of opium were injected into the rectum. During the night, the patient had frequent fits of spasmodic cough, by which he brought up a considerable quantity of blood; towards the morning, however, these fits ceased, and when Professor Lüdgers saw him at about eight o'clock, he was in every respect better than the evening before, being able to lie on the back, and even to get up, without any accession of dyspnœa. The lower portion of the trachea having been drawn downwards as far as the sternum, an attempt was made to unite it with its upper part, by means of a strong ligature; this, however, brought on such a violent attack of suffocation, that it was for the present desisted from. The attempt having been again made in the course of the day, was attended with the same effect, and it was therefore considered advisable to confine the surgical treatment to the application of a bandage, by which the head was kept as near as possible to the chest. On the morning of the 19th, the patient had passed a more tranquil night, being less harassed by the cough. He was without fever, and expressed by signs that he felt great hunger; a small quantity of warm milk and the yolk of an egg, were introduced into the lower aperture of the œsophagus; the thirst was quenched by the instillation of milk into the mouth, though it entirely escaped through the wound. A third attempt at uniting the trachea, failed like the former ones. On the 20th, the patient had slept very well; respiration was easier, and he thought that milk taken into the mouth, entered the stomach when his head was firmly pressed towards the chest. The wound was covered by viscous lymph, without any trace of inflammation or suppuration; the ends of the trachea were as distant from each other as before, and the attempt at bringing them together proved again ineffectual. On the 21st, deglutition appeared to be somewhat more perfect; the anterior surface of the cervical vertebræ was covered with lymph; the margin of the lower aperture of the œsophagus was adherent to the neighboring parts; the external wound was considerably lessened. The contraction of the pharynx was distinctly seen to be continued in the œsophagus, whenever the fluid had by its gravity entered its lower portion. Respiration was observed to be more sibilous than before, and the cough rather hoarse. On the 22d, the patient had passed a very restless night; the cough had been very frequent, respiration was short and hurried, the countenance expressive of anxiety, the face covered with cold sweat; the wound looked healthy, and was covered with lymph. After an opiate enema, the application of a sinapism over the chest, and a warm bath, these symptoms abated; the cough only continued very troublesome, and was accompanied by puriform expectoration. Deglutition became easier, and it appeared as if the two ends of the œsophagus became gradually united, and the patient was accordingly from this time fed by the mouth only. The attacks of dyspnœa repeatedly returned, but were always relieved by the use of sinapisms. In this state the patient continued till the 27th, when there was no opening of the œsophagus visible externally. He now, for the first time, took a little bread-soup, of which but a very small quantity escaped. The ends of the trachea had also become more approximated, being not more

than an inch distant from each other, and they apparently evinced a great tendency to reunion. The wounded parts were accordingly entirely left to themselves, and the patient kept to a spare diet, in order to prevent the partial or total obliteration of the trachea, by too luxuriant granulation. On the 6th of March, the posterior and lateral portions of the trachea were completely united; the patient was, however, still unable to breathe through the mouth, and, on closing the external wound with the finger, an attack of suffocation was immediately produced. On introducing a probe, it appeared that this effect was not produced by any mechanical obstruction of the glottis. The opening of the trachea was of a circular form, and three-quarters of an inch in diameter. On the 12th of March, the patient was able to breathe through the nose; in the evening of the same day, however, a violent attack of cough and dyspnœa came on, which, as appeared on closer examination, was caused by the lumen of the lower portion of the trachea being almost entirely closed by granulations. On introducing an elastic tube, the difficulty of respiration was immediately relieved. On the 15th, another attack of suffocation came on from the same cause, so that it was found necessary to keep the canal constantly open by means of a leaden tube. On the 31st, no change had taken place in the condition of the patient; but as he appeared to breathe freely through the mouth and nose whenever the tube was removed, it was thought proper to discontinue its use entirely; after four days, however, the dyspnœa had again so far increased, as to render the reinsertion of the tube indispensable; in order, however, to accustom the patient to breathe through the larynx, an opening was previously made in the tube, by which the air in the lower portion of the trachea was made to communicate with that in the larynx and mouth. This expedient proved completely effectual, inasmuch as by it the patient was enabled, not only to breathe through the mouth, but also, though indistinctly, to speak. The complete removal of the tube was always, however, after a few hours, attended with dyspnœa, and considerable accumulation of mucus in the bronchia, so as to produce imminent danger of suffocation. The leaden tube was therefore removed, and a silver one placed in the trachea in its stead, and kept in its position by an elastic bandage round the neck. On the 27th of April, he was discharged from the hospital, and on the 29th of January last, when Professor Lüders saw him, he enjoyed very good health, and, with the exception of a very slight cough, had no difficulty of respiration, though still obliged to retain the tube.

SECTION III.

EXPULSION AND FRACTURE OF THE OS HYOIDES.

CASE I. *Spontaneous expulsion of the os hyoides.* Med. Examiner, 1845.

A middle aged woman, of a rachitic constitution, became affected with an enlargement of the glands around the lower jaw, accompanied with a slight cough, and disturbance of the breathing. In spite of treatment these symptoms went on gradually increasing, for three or four years. The sputa became thick and viscid, and were occasionally streaked with blood; the patient was every now and then distressed with attacks of suffocative dyspnœa, and her strength was greatly exhausted by colliquative sweats. The voice was at length completely extinct: and now there was a fixed pain, with an almost continual sense of pricking, in the laryngeal region. The sputa were at this time decidedly purulent, and were often rejected without any effort of expectoration; it was a simple exspuition that followed immediately after a lacerating pain felt in the throat.

The condition of the patient had for a length of time appeared quite hopeless, when most unexpectedly—after experiencing more than usual suffering from the cough, dyspnoea, and pricking pain in the throat—she expectorated in the midst of a convulsive agitation of the whole body, a firm, hard substance, which proved to be a bone of considerable size. On being examined, it proved to be the *os hyoides*. The health of the patient speedily improved, and was ultimately quite restored—five years after the commencement of her first suffering. The bone was examined by several members of the Academy, so that no reasonable doubt as to its nature can be entertained.

CASE II. *Fracture of the os hyoides*. By Dr. Laesque. Journal Hebdomadaire—American Journ. Medical Sciences, 1833.

This fracture occurred in a marine, sixty-seven years of age, who, in a quarrel, had his throat violently clinched by the hand of a vigorous adversary. At the moment there was very acute pain, and the sensation of a solid body breaking. The pain was aggravated by every effort to speak, to swallow, or to move the tongue, and when this organ was pushed backwards, deglutition was impossible; the patient could not articulate distinctly, and he was unable to open his mouth without exciting a great deal of pain. He placed his hand upon the anterior and superior part of his neck to point out the seat of the injury. This part was slightly swollen, and presented on each side small ecchymoses, one above, more decided, immediately under the left angle of the lower jaw. The large cornu of the *os hyoides* was felt very distinctly to the right side, and it could be felt on the left deeply seated, by pressing with the finger; in following it in front towards the body of the bone, a very sensible inequality, near the point of junction of these two parts, could be perceived. By putting the finger within the mouth, the same projections and cavities inverted could be felt, and even the points of the bone which had pierced the mucous membrane, etc., were evident. Having bled the patient, and placed a plug between his teeth to keep the mouth open, the broken branch was brought by the finger back to the surface of the body of the bone, and easily reduced. The position of the head inclined a little back; rest, absolute silence, diet, and some saturnine fomentations, composed the after-treatment. To avoid a new dislocation by the effects of swallowing, the œsophagus tube of Desault was introduced, to conduct the drinks and liquid aliments into the stomach; this *sonde* was allowed to remain until the twenty-fifth day; at this time the patient could swallow without pain, and began to take a little more solid nourishment, and at the end of two months the cure was complete. By placing a finger within his mouth a slight nodosity could be felt in the place where, in the recent fracture, the splintered points were perceptible.

CASE III. *Fracture of the os hyoides produced by a fall*. American Journal Med. Sciences, 1855.

Dr. Williams related several interesting circumstances connected with a case of which he had received an account from Dr. A. F. Sawyer, of San Francisco. The patient fell a distance of about fifty feet, and, among other injuries, sustained double compound and comminuted fracture of the jaw, and *fracture of the os hyoides*. On the fourth day, Dr. S. was hastily summoned, and found the patient suffocating from closure of the glottis. He performed tracheotomy under circumstances of unusual difficulty, making his incisions without assistance, through tissues which were swollen and turgid from infiltration of air and serum, and, by means of artificial respiration, restored the patient to life. Three weeks after the accident, the patient had secondary

hemorrhage from the jaw, by which he was rendered nearly pulseless. This was arrested by ligature of the right faeial artery. The canula was kept in the trachea for ten days, at the end of which time the patient could breathe freely through the natural passages.

SECTION IV.

FOREIGN BODIES IN THE AIR-PASSAGES.

CASE I. *A shawl-pin extracted from the larynx of an infant.* By Valentin Mott, M. D., Emeritus Prof. of Surg., New York University, New York. *Lancet*, 1842.

A. B., a fine healthy infant, five months old, while playing in the arms of its nurse, about two o'clock in the afternoon, was suddenly seized with violent spasms of the throat, which seemed to threaten immediate strangulation. It had at the time a crust of bread in its hand, a portion of which it was supposed by the family had found its way into the pharynx, and remaining there occasioned the alarming symptoms. Dr. Mott was immediately sent for, and arrived about two hours afterwards; the violent convulsive action had then ceased, and he found the child in a state of partial asphyxia—the breathing was extremely difficult, and of that peculiar character which at once led Dr. M. to say that there was some extraneous body in the larynx or trachea. The Doctor did not deem the symptoms sufficiently urgent to justify the immediate performance of an operation; he made repeated visits at brief intervals, however, until thirty-one hours had elapsed, when he considered that the case had reached a point which imperatively demanded the performance of the operation of tracheotomy—this was about ten o'clock P. M., on the succeeding day, and the operation was of course performed by candle-light. After the external incision, which was cautiously made, the veins on the upper part of the trachea, and the thyroideal veins, were seen enormously enlarged, the latter being nearly as large as the end of the little finger, from the impeded circulation, occasioned by the violent spasmodic action of the muscles. An incision was then made through the cricoid cartilage and three or four rings of the trachea, in the course of which a very small artery was divided; the completion of the operation was delayed until the hemorrhage from this small vessel ceased, which it soon did after careful sponging. The larynx was then opened, and a common shawl-pin was extracted. The pin lay obliquely across the larynx with the head downwards, and had thus remained during thirty-two hours.

For upwards of two days there were strong "croupy" symptoms, but the case ultimately turned out remarkably well.

CASE II. *Death from a leech in the larynx.* By Dr. Laeretelle. *Gazette de Santé—Lancet*, 1828, vol. xiv.

A soldier suddenly felt a sense of suffocation, and the surgeon of the regiment was sent for in great haste. The fact was, that passing through a country during great heat, the man drank, without the least precaution, in most of the streams, or even pools, which they met with. We found our patient with a red and swollen face; his mouth frothy, his eyes turned up, and his breathing almost entirely suspended. After this paroxysm, he came to his senses; he soon fell, however, into the same state. No symptom of apoplexy was present; his breathing only appeared embarrassed, and the obstacle which opposed the entrance and exit of air, appeared to us the sole cause of all these symptoms. On attempting to answer any questions, a fresh

paroxysm came on, and he was compelled to desist. The introduction of a foreign body into the trachea, appeared to us as the probable cause of his sufferings, hence we decided on performing laryngotomy. Whilst we were making preparations for this operation, our patient breathed his last.

On opening the body, we discovered a leech in the right ventricle of the larynx; it was only with great trouble that we detached it from its situation. Its body, rather large, obstructed the glottis, and rendered the entrance of air, by this opening, almost impossible.

CASE III. *A bullet successfully removed from the windpipe by tracheotomy.* Communicated to Dr. Mitchell by John Newman, M. D., of Salisbury, North Carolina, Dec. 1806. New York Med. Repository, vol. x.

A few weeks ago a child of four years old, the son of a Capt. Cooke, of this county, being at play with his companions in a house where the family were sitting, and having in his mouth a leaden bullet, which had been considerably indented by the teeth of some of the children, accidentally passed the bullet with its rough surface into the windpipe, which instantly produced strong symptoms of approaching suffocation in the child, and which continued by spells, with a few hours remission, until the seventh day, when his parents applied to me for such aid as the case would admit of, and I might judge necessary and advisable, after having tried unsuccessfully every expedient that practitioners and others in the neighborhood suggested. Their first application to me was at a late hour of the night, at which time the child appeared to have some mitigation in the symptoms of an obstructed *trachea*, except a lividness under the eyes, which never disappeared, with other marks of approaching suffocation; such as a wild, distorted appearance of the eyes, a dark purple color of the face, foaming at the mouth, gulping, croaking, and laborious respiration. The hour of night being now late, and the child appearing to be in no immediate danger of suffering a suspension of respiration, I deemed it most advisable to defer any operation that would be necessary until morning might afford us sufficient light, unless alarming symptoms should occur before; in which event I desired the parents to give me notice, so that I might attend and watch the progress of the symptoms, to enable me to judge of the situation of the bullet, and whether there was any prospect of removing it from the windpipe, and thereby preserve the life of the child. Respiration being very difficult during the night, the child rested badly; but not being so ill as he had been for some nights past, the parents and others that sat up with him did not think it necessary to call upon me, as they did not expect any operation could be performed before morning. After daylight the child was brought to my house, and appeared to be better than he had been during the night. Respiration being now performed more freely and easily than would have been supposed possible in such an obstruction of the trachea, I was induced to conjecture either that the bullet had been discharged from the trachea, or had lodged itself in one of the *bronchia*, and might possibly not rise again to impede respiration, and endanger the child's life, he having a longer remission in the symptoms than had happened before. The following expedient was then adopted to satisfy me of the situation of the bullet, viz.: The child being suspended by the feet and legs, and his head and shoulders inverted, I agitated his body, and gave him repeated strokes on his back with my hand. In a few minutes the bullet was dislodged, and passed with considerable force (making a noise like that of a pop-gun), until we heard it strike the head of the windpipe. The face of the child immediately became purple, respiration laborious and very difficult, and other symptoms of strangulation so alarming as to excite apprehensions of a speedy dissolution of the child, unless the bullet

could be removed from its present situation. Having my instruments and assistants all ready, I forthwith made an incision into the windpipe, longitudinally, dividing four or five of its cartilaginous rings, and as near to the sternum as was considered safe, that I might the more readily raise the bullet if it should again fall below my incision, into its former bed. The child appearing to respire with less difficulty before my incision was completed, I was apprehensive the bullet had again fallen down by its own gravity. After completing my incision through the windpipe, I introduced a probe, crooked at the end, towards the lungs, with a view of searching for the bullet, which excited a cough, and seemed to give considerable uneasiness to my patient. I then withdrew my probe, and after suspending the child several times by the feet and legs, with the head and trunk inverted, the probe was again introduced, and passed up towards the epiglottis. After removing some obstruction which my probe met with at the head of the windpipe, I opened the jaws of the child and depressed his tongue, that I might observe whether the probe or bullet was visible in the fauces. On pushing the probe forward I could see its head and bent end very plainly, but could not see the bullet. I then withdrew my probe and placed my patient in as easy a situation as possible on the lap of his father, leaving the incision of the windpipe open, to the end that another search might be made for the bullet, in case there should be any reason to believe it was still in the trachea, and had not been pushed by the probe through the larynx into the œsophagus, and from thence carried into the stomach of the child. As my patient now appeared to respire very freely and easily, and to suffer no uneasiness except from a cough which attacked him at short intervals, and was always followed with a discharge of fetid air and purulent mucus from the wound of the windpipe, I was soothed with hopes and the belief that the bullet had passed into the stomach; but as I was still uncertain whether the bullet was in the trachea or one of its ramifications, or had passed into the stomach after having been pushed into the throat by the probe, I was resolved to continue the wound open a few hours longer and wait the operation of a strong purge: I accordingly administered a dose of jalap and calomel, under an expectation (if the bullet had passed into the child's stomach, at the time mentioned above) that it would appear in the first evacuations from the purge. In a few hours after administering the purge, I had the satisfaction to see the bullet discharged with the first stool procured by the purge. After this much-desired event of seeing a bullet which had been the cause of so much anxiety and distress to the parents of the child and myself, I closed the incision in the trachea with a few stitches and an adhesive plaster, and in a few days afterwards enjoyed the further satisfaction of finding my little patient restored to as perfect health as he had ever experienced in his life, without the smallest injury to his voice. In the same neighborhood there have been two fatal instances of children passing small beans into the trachea.

CASE IV. *Death from a fish in the trachea.* Lancet, 1843, vol. xliv.

A young man, living a few miles from Paris, swallowed, for a wager, a young fish, which instead of going down his stomach, stuck in the throat and suffocated him. When medical advice was called the patient presented all the symptoms of incipient asphyxia, and an instant removal of the intruding body seemed the only method of preserving life. Under the impression that the trachea was partially closed by pressure exerted by the body impacted in the œsophagus, a sound was introduced through the nostrils (for the mouth was convulsively closed) down as far as the cardiac orifice of the stomach, but without finding any obstacle to oppose its passage; and it was then conjectured,

from percussion and auscultation, as well as the general symptoms, that the fish had entered the trachea. Tracheotomy was proposed, but strongly objected to by the patient's friends, and death soon followed. The operation was performed after death, by way of demonstration, and after some difficulty there was extracted from the trachea, a perch about an inch and a quarter long, by three-quarters of an inch broad.

CASE V. *Death from a potato-skin acting as a valve during inspiration.* Cormack's Edinburgh Med. Journal—Lancet, 1844.

Dr. Jackson, of Leith, was called to see H. S., a cooper, aged thirty-one, of irregular habits, who had died when in a state of intoxication. On dissection, the lungs and heart presented all the appearances characteristic of asphyxia. The cause of this was made apparent on examining the larynx, where it was found that a piece of potato-skin, of an irregular triangular shape, little more than an inch long, thin as the finest paper, and perfectly transparent, lay entangled between the folds of the thyro-arytenoid ligaments, one of the ends being fastened over the posterior end of the rima glottidis, whilst the other two margins were free, forming a valve which would open by each expiration, but shut at each inspiration, so causing speedy suffocation. The piece of potato-skin had probably been ejected from the stomach by vomiting, along with other matters.

CASE VI. *A needle with a thread in the larynx.* By the late Professor Blandin. Journ. Hebdomadaire de Méd.—American Journal Med. Sciences, 1829, vol. iv.

A man, aged twenty-five, whilst irritating his nostril with a needle, carelessly let go his hold, when the needle passed into the nostril and thence into the pharynx. The needle was armed with a large thread, which entered with it, and the whole disappeared. Much irritation and cough being excited, the thread was thrown out of the mouth, and the patient then endeavored, but in vain, to extract the needle by pulling at the thread; every attempt caused acute pain. The respiration and voice becoming affected, and all efforts at extraction being vain, the patient entered the Hôpital Beaujon, June 18th, 1828. At this period the pains had considerably increased, the slightest efforts at deglutition augmented all the symptoms, so that all movement of the pharynx was impossible; the voice was nearly lost; he had a very unusual and remarkable hoarseness, a frequent cough, and every effort at coughing produced spasms of the muscles of the neck. The soft parts covering the larynx were much tumefied, the skin red and painful. The house pupil having in vain endeavored to extract the needle by means of the thread, sent for the surgeon, M. Blandin. When M. Blandin arrived, he found the patient still in the state already described, and in an effort at deglutition, the thread had entered the pharynx. Not being able to seize the thread, and thus to ascertain positively whether the needle was in the pharynx or larynx, and the pain of respiration being still supportable, it was determined to trust the ease to antiphlogistics, general and local, which were employed with some success. But on the evening of the 21st, the thread was again ejected, by means of which Dr. Blandin ascertained that the needle had entered the superior aperture of the larynx on the left of the epiglottis. On the 22d, the symptoms became much aggravated, and it was determined to perform laryngotomy. This was executed by making a cautious dissection through the indurated and swollen parts, in front of the larynx, then carefully puncturing the crico-thyroid membrane, and afterwards dividing, by means of a director and bistoury, the thyroid cartilage, through its whole length, in the median line.

The respiration was now much relieved, and an attempt was made to discover and remove the needle by means of forceps, but they produced so great an irritation as to induce the operator to desist. The wound was lightly dressed by means of a perforated compress covered with simple cerate, and the patient put to bed. The night was passed comfortably, and the next day the needle was found fixed in the compress covering the wound. The wound gradually healed, so that by the beginning of September, only a small fistula remained, but the voice was hoarse. There was some pain in the larynx, and other indications of chronic inflammation, for which leeches, a seton to the back of the neck, etc., were prescribed, and afterwards mercurial frictions on the sides of the larynx, and caustic to the fistula. On the 30th of September, the fistula was closed, and the voice had acquired more force.

CASE VII. *The larynx of a goose impacted in the trachea of a child.* By Dr. Burow. Caspar's Wochenschrift—Braithwaite's Retrospect, 1850.

The children in Dr. Burow's vicinity are very fond of blowing through the larynx of a recently-killed goose, in order to produce some imitation of the sound emitted by this animal. When given to them for that purpose, it has usually ten or twelve rings of the trachea connected with it.

A boy, æt. 12, while so engaged (Nov. 1, 1848), was seized with a cough, and swallowed the instrument; a sense of suffocation immediately ensued, which was, after awhile, replaced by great dyspnœa. Dr. Burow found him laboring under this eighteen hours after, his face swollen, of a bluish-red color, and covered with perspiration. At every inspiration, the muscles of the neck contracted spasmodically, and a clear, whistling sound was heard; and at each expiration, a hoarse sound, not very unlike that of a goose, was emitted. As, on passing the finger down to the *rima glottidis*, it was found closed, Dr. Burow felt convinced (improbable as, from the relative size of the two bodies, it seemed) that the larynx of the goose had passed through it. Tracheotomy was at once performed; but owing to the homogeneousness of structure of the foreign body and of the parts it was in contact with, the greatest difficulty existed in distinguishing it by the forceps. Moreover, so sensitive was the mucous membrane, that the instant an instrument touched it, violent efforts at vomiting were produced, and the entire larynx was drawn up behind the root of the tongue. At last, after repeated attempts, Dr. Burow having fixed the larynx in the neck by his forefinger, so that it could no longer be drawn up on these occasions, he contrived to remove the entire larynx of the animal. The child was quite well by the ninth day. Dr. Burow says that it was a matter of great congratulation for him that many pupils were present during this operation, and thus able to confirm the correctness of a statement so incredible as to stand much in need of such confirmation.

CASE VIII. *Removal of a cockle-bur from the glottis.* By L. A. Dugas, M. D., Prof. of Surgery in the Med. College of Georgia. Southern Med. and Surg. Journal, 1853.

York, a negro boy, 12 years of age, belonging to Mr. —, of Columbia county, was engaged in November last in removing cockle-burs from the mane of a horse, and put one of them in his mouth. By a sudden inspiration, the bur was carried down his throat, and he immediately experienced some difficulty in breathing, attended with frequent coughing. Medical aid was invoked, and an emetic administered without relief. The boy continued in this state several days, and was then brought to this city. We found that he breathed and coughed as though affected with œdema glottidis or with membranous croup; his voice was extinct, and he spoke in a whisper; on walking

briskly he suffered for want of breath; he pointed to the thyroid cartilage as the seat of soreness; had some arterial excitement: nothing abnormal heard on auscultating the lungs, but a whiz was perceived on placing the stethoscope upon the larynx. By the most careful ocular inspection of the pharynx the bur could not be seen. The finger being, however, carried down below the epiglottis, would feel the bur rise up against its extremity whenever the larynx was elevated by an attempt at deglutition. The cockle-bur was evidently situated vertically, with one end within the laryngeal aperture, and so securely fixed by means of its minute hooks into the mucous membrane, that its position could not be changed by such delicate touches with the finger as I thought it prudent to make during the momentary contact alluded to. A pair of œsophageal forceps being at hand, I made, in vain, repeated attempts to seize the bur, until the patient became very much exhausted. The continual movements of the larynx presented an insuperable difficulty. He was then allowed to rest, and an emetic of ipecacuanha administered in the evening, in the hope that the bur might be dislodged during the efforts to vomit. This also failed, as it had done before.

On the following morning (8th Nov.) I provided myself with a pair of small curved polypus forceps, and carrying the index finger of the left hand down below the epiglottis, forcibly-drew this upwards, and at the same time glided the finger still lower, until its extremity rested in contact with the bur. The forceps were now, with the right hand, carried along the finger, and the bur effectually seized and extracted, after but one failure.

CASE IX. *A foreign body (a pin) getting into the windpipe without passing through the rima glottidis, successfully extracted.* By De la Martinière. Chelius's Surgery, by South, vol. iii.

One of the most remarkable instances of a foreign body getting into the windpipe without passing through the *rima glottidis* is mentioned by De la Martinière. A child, nine or ten years of age, amusing himself with cracking a small whip, was suddenly seized with extreme difficulty of breathing, and soon exhibited all the symptoms of approaching suffocation. He complained, by gesture, of some impediment in the *trachea*. The surgeons who saw him, aware that he had never been left alone, and that he could not have put anything into his mouth, did not suspect the existence of a foreign body impeding respiration. He was bled, the throat examined, and an œsophageal bougie passed, without making any discovery. The symptoms became more urgent, and De la Martinière saw him an hour after. "On examining the neck externally, I found," says he, "a small red spot on its fore part, like the middle of a flea-bite, immediately below the cricoid cartilage, and beneath it was felt deeply a little circumscribed ganglion as large as a lentil, corresponding to the red spot, and of unnatural brightness; the sensation could not have been more distinct through the thickness of the parts. I at once determined to cut through the skin and fat upon this spot. The finger having been introduced into the wound, and touching the tubercle, which was close to the windpipe, I deepened it with a second stroke of the knife, and laid bare the cartilaginous rings of that tube. I felt with my nail an irregularity, projecting at least a line above its convexity, and endeavored in vain to seize it with the dressing forceps. Luckily I had with me a pair of hair-nippers, and with these caught hold of the body, which I drew out, and, to my great surprise, found it to be a large copper pin without a head, about an inch and a quarter long, which had pierced through the windpipe from left to right." The child got well in a few days.

CASE X. *A piece of sponge one inch and three-quarters in length, one inch and a quarter in width, and fifteen-sixteenths of an inch in thickness, removed by tracheotomy; patient died.* By Profs. Crosby and Peaslee, of New Hampshire.

This instance presents, in all probability, the largest foreign substance ever removed from the windpipe. Many, indeed, were sceptical at the time it was published, as to the possibility of so large a body passing the rima glottidis. But, the history of the case and the character of the witnesses banish all doubt in regard to it, and should settle forever, as has been correctly remarked, the question of passing the probang down the trachea in cauterizing the throat.

It is reported by Prof. E. R. Peaslee, M. D., in the *New Hampshire Journal of Med.*, 1852:—

John A. Dobie, æt. about forty-four, a well made, robust man, a book-binder and bookseller, having lost the cartilaginous, and also part of the bony septum of the nostrils, from a scrofulous affection, was in the habit of introducing a piece of moistened sponge into the nasal passages several times a day, to remove the fetid secretion produced by the still progressing disease just mentioned.

On the 23d of July, 1850, while applying the sponge as usual, before entering his shop, immediately after dinner, he accidentally let it slip from his fingers, and it passed back at once through the posterior nares. A paroxysm of coughing, with considerable dyspnoea, at once ensued; and I being hastily sent for, saw him probably within three minutes after the accident occurred, at ten minutes before one o'clock P. M.

Being told by the patient that he had "a piece of sponge in his throat," I at once passed my finger into the pharynx, expecting to find and dislodge it. Disappointed in this, and being assured by him that he distinctly felt it in the bottom of the pharynx, and just below the point reached by the finger, I then explored that part with the long-curved pharyngeal forceps, and thus ascertained that it was not in the *pharynx* at all. But he now insisted that my manipulations had carried it farther down, and that he could still distinctly feel it lower and in the *œsophagus*.

His breathing was, however, now much easier, and his cough ceased almost entirely; and I now inquired more particularly as to the precise size of the sponge, he having at first said it was "large as half a hen's egg."

He now placed his right forefinger across the left fore and middle fingers, at the articulation of their 1st with their 2d phalanges (thus isolating four phalanges in all), and said, "it is as large as that." Of this, on being further questioned, he said he was "certain." Well knowing his great accuracy of judgment, especially in regard to any mechanical matter, I was inclined to rely on his assertion far more implicitly than I should in the case of most men; and the sequel will show that I was not thus deceived.

I next examined a larger piece of sponge, from which the one now producing mischief was taken, and found it coarse and easily torn. Still *so large* a piece as the patient indicated, could not, it seemed to me, be so compressed by any means supposable in the case, as to pass readily through the rima glottidis of a healthy larynx (as there was every reason for believing the patient's to be), or if this had actually occurred, it must still have remained so much condensed, even in the trachea, that the air could not pass so freely to and fro in that tube, as it did at this moment. I therefore stated to the patient that if his estimate of size were correct, it was "almost an anatomical impossibility" that the sponge could be in the trachea; that I still feared he was mistaken, and it might prove to be there; but that I would be certain it

was *not* in the other passage before I should decide that it *was* in the trachea.

Various means, an emetic, tickling the pharynx, swallowing water, etc., having satisfied his physicians that the sponge was in the windpipe, tracheotomy was resorted to twenty-two hours after the accident.

The patient placed himself as directed, upon a sofa, his head being slightly elevated upon a pillow, and an incision an inch long was made by Dr. C. through the skin, and subsequently into the areolar tissue beneath. The parts, however, became immediately obscured by the hemorrhage; and the incision into the trachea being made under these circumstances, and while the tube was not in a state of tension, was not at first sufficiently extensive. It was, however, rapidly enlarged, and a long forceps passed through it by Dr. C. into the trachea, but without finding the sponge. But in the meantime, the blood, still flowing freely, was drawn into the trachea at each inspiration; had filled the tube from the sponge up to the incision, and thus completely asphyxiated the patient. It was remarked that the patient was dying, and subsequently added, "he is dead;" when a proposition on my part to try to get the sponge being assented to, I reached after it with the forceps, after rapidly removing the blood with a pellet of cotton; and succeeded in bringing away a portion about as large as a pea. A second attempt secured only a similar result, the mass was so firmly impacted; but the *third* removed the whole mass, as was supposed at the time—though it will anon appear that a very small portion still remained adherent to the membrane. Still, the patient did not begin to breathe again after its removal; but after applying the usual means for exciting the respiratory movements, he at length gasped, and in a few minutes was able to answer questions.

The sponge was even larger than the patient had said. Another piece cut out as a fac simile of it, but found on accurate comparison to be somewhat thinner and *smaller*, is, when moistened, $1\frac{3}{4}$ inch long, $1\frac{1}{4}$ wide, and 15-16 of an inch thick; all this in addition to the three small pieces detached from the original, as before said.

I now expected to take no further part in this case, and learned of Dr. C., at half-past twelve, that he had closed the wound and just left the patient. But within thirty minutes afterwards, I was sent for in great haste (as I resided nearer than Dr. C.), as the patient appeared to be dying. I found him breathing with greater difficulty than ever before,* livid and insensible; and the neck swollen out almost to a level with the chin, from combined emphysema, and hemorrhage into its areolar tissue. I at once reopened the wound, and on passing a probe down to the bifurcation before finding a spot in which irritability enough still remained to excite a cough, I succeeded in making him expel four ounces or more of fresh blood from the trachea and bronchi, when his respiration and color again at once somewhat improved. Dr. C. coming in soon after the patient was relieved, and learning from me what I had done, and why, remarked that he must leave the patient in my care till night, and withdrew. I then introduced a canula into the trachea, and called several times during the P. M. to aid him in expelling the blood which still remained in the bronchi, by passing a feather down to the bifurcation, as before explained. During all this time he was at best in a semi-comatose condition; could briefly reply to a question, when directly put to him, but never uttered a word otherwise, when I was present.

I have no means of knowing the particulars of his subsequent condition.

* Except during the operation, as before stated.

His death occurred on the P. M. of the 26th July, about fifty-three hours, I think, after the operation.

Post-mortem examination, twenty-four hours after death, by Dr. Crosby and myself. Only the respiratory organs were examined: and the following is a verbatim copy of the results, as written down at the time at Dr. C.'s request:—

Larynx—large and well proportioned, but in no respect abnormal.

Trachea—inflamed throughout. A patch of inflammatory exudation just above the bifurcation, equal to about a square inch in extent; imbedded in which, and upon the left side, was a piece of sponge about the size of a common white bean, and so adherent as to detach the membrane when removed.

Right lung—very general old adhesions, with inflammation of the upper lobe, and extensive congestion of the others. The bronchial tubes yielded a large quantity of bloody mucus.

Left lung—lower lobe inflamed; nothing unusual in the other.

CASE XI. *A piece of lead passed down the windpipe, causing death from an abscess in the right lung.* By Dr. A. H. Paquet, of Canada. Nelson's American Lancet, 1854.

Some four years since, a child named Brulez, nine years old, while hurrying to school, was said to have swallowed a piece of *lead* he had in his mouth; and that the lead, instead of passing down the œsophagus, had entered the larynx and found its way into the lung. He lived up to this day presenting *externally*, at least, all the evidences of tubercular affection, and for which he underwent various modes of treatment at the hands of several physicians. Having, contrary to the opinion of his physicians, expressed the idea that the mischief resulted from the presence of the foreign body in the lung, I was requested by the friends, on the 4th of June, 1854, to make an examination of the body, and the following appearances were noted:—

The left lung was in a perfectly normal state. Some slight effusion in the pericardium. The right lung had preserved nearly its primitive form, but after dividing through about one inch of hepatized substance, I discovered a true fistulous canal, which, in form, represented a cone with its base upwards. The sinus was filled with an enormous quantity of pus mixed with shreds of pulmonary structure. The cavity at its upper part was of dimensions sufficient to admit the closed fist, and growing smaller downwards, allowed the index finger to come in contact with the *foreign body which had traversed the whole length of the lung* to within about a line of the diaphragm. On cutting open the lung it presented absolutely the appearance of a cavern, whose descriptive details are to be found given by authors.

The piece of lead, very rough, is of an elliptical form, weighs 85 grains, is twelve lines in length and five in width.

CASE XII. *A prune-stone in the left bronchus of a child causing its death in thirty-two days.* By John S. H. Fogg, M. D., of South Boston, Massachusetts. Boston Med. and Surg. Journal, 1852.

I was summoned in haste on Monday, May 17th, to Ephraim W. Myers, a child $3\frac{3}{4}$ years of age, who was suffering, the messenger informed me, from an attack of convulsions. On my arrival I found him in severe apparent distress, with cough, pallid surface, accelerated respiration, pulse 160. There were no convulsive movements, the child was perfectly conscious. He was suffering from a severe attack of pneumonia, as an examination of the chest at once revealed. I immediately gave a cathartic, and followed with small

quantities of hydrarg. chlo. mit., ipecac. and digitalis every two hours. A blister was also applied to the chest.

I learned from the family the following history of the case: On the 7th of May, ten days previous to my first visit, the boy came home from school in great distress. His story was, that a boy threw him down as he was returning from school with something in his mouth, and the substance immediately choked him. A physician was called in, and, notwithstanding the state of the boy, who was unusually intelligent, pronounced it a case of croup. The patient had a severe convulsive cough, great anxiety, with danger of suffocation, and much difficulty both in inspiration and expiration. About ten hours after the attack the symptoms were *suddenly relieved* while swallowing a dose of castor oil. The next day he was pronounced better, and the four succeeding days was quite comfortable, playing about the house. There were, however evening exacerbations of fever, respiration, &c. On Wednesday, the fifth day from the attack, Dr. George Heaton, a friend of the family, was called, and after an investigation of the case inclined to the opinion that some foreign body had entered the air-passages. The child was suffering from bronchial irritation, and he prescribed an expectorant mixture. Dr. H. saw the child again on Saturday, the eighth day after the attack. He appeared bright and playful, very much improved since the last visit. On Monday, the tenth day, I was called, as stated above. The history of the case left little doubt in my mind of the true nature of the first attack, and I had little hesitation in concurring in the opinion entertained by Dr. Heaton. It seemed quite apparent that some foreign body must have lodged in the larynx during those ten hours of *croup*; and that it had become dislodged and passed down the trachea when the patient experienced sudden relief.

It is needless to detail the case from day to day. Every effort was made to relieve the little patient, but his sufferings could merely be palliated. The paroxysms of cough for the most part were not violent and convulsive. There were no peculiar symptoms to fix with precision the location of the foreign body. The most apparent difficulty of breathing throughout the disease was in expiration. Inspiration was comparatively easy and natural. The number of respirations did not at any time exceed 60 per minute.

On the 5th of June, twenty-nine days from the first attack, he was supposed to be dying. I was called, and found him suffering with most intense dyspnoea, face and limbs livid, coughing violently, and discharging from the lungs large quantities of very offensive pus. Relief was obtained temporarily, but for the next three days he continued to suffer from paroxysms of the same character, but of less intensity.

On the morning of Tuesday, June 8th, thirty-two days from the first attack, I visited him and found him apparently as comfortable as on the previous day. While I was present a severe attack of coughing came on, with intense dyspnoea, and a profuse discharge of matter through the nose and mouth. The dyspnoea rapidly increased, and in a very few moments life was terminated.

Six hours after death an examination was made. The mucous membrane of the larynx and trachea was thickened, and its vessels congested. The left lung was bound down by firm and extensive adhesions. The lower lobe of the left lung was in a state of gangrene. From six to eight ounces of offensive putrid pus was discharged from the lungs during the examination. The pericardium contained a large quantity of serum. Upon dividing the trachea there was found, about one-eighth of an inch beyond the bifurcation, lodged in the *left* bronchus, a large *prune-stone*, measuring one inch in circumference and three-fourths of an inch in length. It was quite firmly impacted, and the moisture had not apparently affected it. There was scarcely space to pass

a probe down either side of it. Everywhere in the vicinity of the seat of this body the bronchial tube was increased to many times its natural thickness.

It seems hardly credible that a body of that size could enter the larynx of so young a child without immediate suffocation. Nothing but its peculiar conformation, admitting air between its flattened sides and the bronchial walls, could have prevented such an occurrence.

CASE XIII. *The celebrated case of the Thames tunnel engineer, Mr. Brunel; a half-sovereign in the right bronchus. Tracheotomy, and its ejection by the mouth after forty-four days' sojourn.* By Benj. C. Brodie, F. R. S. British and Foreign Med.-Chir. Review, 1844.

On the 3d April, 1843, Mr. B. playing with a half-sovereign in his mouth, it slipped behind the tongue, and a violent fit of suffocative cough ensued. Vomiting followed. In the course of the evening he coughed moderately at intervals. Some soreness and stiffness of the throat remained for 24 hours, after which he employed himself as usual, and even entertained some friends at dinner. We find it difficult to abbreviate *usefully* the particulars which follow, and shall therefore quote them entire.

"On the 6th of April, he was again troubled with a cough. On the 7th, he went on a journey into the country, and was more or less exposed to a cold northeast wind for two days and nights. The cough now became aggravated. He expectorated some mucus slightly tinged with blood, and small portions of a substance answering to the description of a thin membrane. He experienced, also, a pain in the right side of the chest, referred to a spot corresponding to the situation of the lower portion of the right bronchus.

"On the evening of the 9th of April, he took two aperient pills, one of which was ejected by vomiting some time afterwards. In the act of vomiting, he experienced a sensation as if a loose substance had shifted its place in the chest; and for some time afterwards the cough was much relieved, and the pain in the chest entirely ceased.

"On the 11th of April, the cough was again troublesome. There was little or no expectoration. At this time the chest was repeatedly examined, with the stethoscope, by Dr. Seth Thompson, but no unusual sounds were detected in any part of it.

"On Monday the 17th of April, Mr. B. again went into the country, exposed to a cold easterly wind. On his return to London, the cough was again much aggravated.

"On the 18th of April, by the advice of Dr. Seth Thompson, he consulted Dr. Chambers, and afterwards myself. From the detail of the symptoms, we were all of us led to believe that the half-sovereign had passed into the trachea, and that it remained lodged in the right bronchus.

"On the 19th, this opinion seemed to be confirmed by a very simple experiment, which Mr. B. had himself made in the interval. He had placed himself in the prone position, with his sternum resting on a chair, and his head and neck inclined downwards, and, having done so, he immediately had a distinct perception of a loose body slipping forward along the trachea. A violent convulsive cough ensued. On resuming the erect posture, he again had the sensation of a loose body moving in the trachea, but in the opposite direction, that is, towards the chest.

"On the 20th, I saw the patient again, with Dr. Thompson. I now suggested that a further consultation should be held on the case; and, accordingly, on the following day there was a meeting of Dr. Chambers, Dr. Seth Thompson, Mr. Stanley, Mr. Aston Key, and myself. The chest was again carefully examined by means of the stethoscope, but no difference in the

state of the respiration could be detected. The other indications of the existence of a foreign body in the air-passages, however, seemed to be so strong, that no one entertained any doubt on the subject. At this meeting it was agreed that the experiment which Mr. B. had himself made, should be repeated in a more complete manner. Accordingly, on the 25th of April, he was placed in the prone position, on a platform made to be movable on a hinge in the centre, so that on one end of it being elevated, the other was equally depressed. The shoulders and body having been fixed by means of a broad strap, the head was lowered until the platform was brought to an angle of about 80 degrees with the horizon. At first no cough ensued; but on the back, opposite the right bronchus, having been struck with the hand, Mr. B. began to cough violently. The half-sovereign, however, did not make its appearance. This process was twice repeated, with no better result; and, on the last occasion, the cough was so distressing, and the appearance of choking was so alarming, that it became evident that it would be imprudent to proceed further with this experiment, unless some precaution were used to render it more safe.

"On the 27th of April, in a consultation of Dr. Seth Thompson, Mr. Aston Key, and myself, it was agreed that an artificial opening should be made in the trachea, between the thyroid gland and the sternum. In proposing this, we had a twofold object; the one, that if the coin were lodged in any part from which it might be safely extracted by the forceps, this method might be had recourse to; and the other, that, if relief could not be obtained in this manner, the artificial opening might answer the purpose of a safety-valve, and enable us to repeat the experiment of inverting the body on the movable platform, without the risk of causing suffocation. The operation was immediately performed by myself, with the assistance of Mr. Aston Key and Mr. Charles Hawkins; and on its being completed, some attempts were made, both by Mr. Key and myself, to reach the coin with the forceps introduced through the opening. The contact of the instrument with the internal surface of the trachea, however, induced on any occasion the most violent convulsive coughing. The coin was not seized, nor even felt; and our apprehensions of producing some serious mischief were such, that we did not deem it prudent, at that time, to persevere in our endeavors to remove it.

"On the 2d of May, we again made some trials with the forceps, but always with the same result. A violent convulsive action of the diaphragm and abdominal muscles ensued, on each introduction of the instrument; and the danger of groping in the bronchus, under such circumstances, surrounded as it is by the most remarkable assemblage of vital organs in the whole body, appeared to us to be so great, that we did not think ourselves justified in proceeding further. We were the more inclined to abandon the experiment with the forceps, as we had a strong expectation that a recurrence to the first experiment, now that the safety-valve was established, would prove successful.

"On the 3d of May, a consultation was held with Mr. Lawrence and Mr. Stanley. They entirely concurred in the views of Mr. Aston Key and myself, and it was agreed that nothing more should be attempted until Mr. B. had sufficiently recovered from the effects of what had been already done, to admit of his being again inverted on the movable platform.

"A probe, or director, was occasionally introduced into the wound of the trachea, with a view to keep it in an open state; and, on the 13th of May, the patient having been placed on the platform, and brought into the same position as formerly, the back was struck with the hand; two or three efforts to cough followed, and presently he felt the coin quit the bronchus, striking almost immediately afterwards against the incisor teeth of the upper jaw, and

then dropping out of the mouth; a small quantity of blood, drawn into the trachea from the granulations of the external wound, being ejected at the same time. No spasm took place in the muscles of the glottis, nor was there any of that inconvenience and distress which had caused no small degree of alarm on the former occasion.

"It is unnecessary to describe the progress of the case afterwards. On the 20th of May, Mr. B. had sufficiently recovered to be able to go for change of air into the country, and when I saw him, about a fortnight afterwards, the wound of the neck was nearly healed."

CASE XIV. *A shot in the bronchus; ejection of it by cough and inversion of the body.* By Dr. Richard Hopkins, in Dr. Gross's work on Foreign Bodies in the Air-passages.

A young lady, espying a middle-sized shot upon the floor, put it into her mouth, and was gently chewing it, when, in a sudden fit of laughter, she allowed it to pass into the trachea. Violent coughing immediately succeeded the accident, and harassed her almost incessantly. Four physicians were called in, and, during several weeks, made use of a variety of remedies, such as repeated bleedings, and oleaginous, demulcent, and anodyne medicines, which, although they somewhat appeased the cough, failed to afford permanent relief. In this condition the patient was abandoned by her professional attendants, under the impression that their services could be of no further benefit. The mother, an unusually intelligent woman, now determined to watch her with redoubled vigilance, and to contrive some plan by which she might promote the expulsion of the foreign substance. Having carefully inspected the larynx and trachea of a hog, it occurred to her that the shot might find its way out by the glottis by inverting the body. This conclusion derived support from the fact that the shot had often been felt high up in the throat, during violent fits of coughing. Having duly reflected upon this subject, she resolved to put her theory to the test of practice, without having imparted the scheme to her daughter. Waiting for a violent attack of coughing, she threw her forcibly out of the bed upon her hands, and had the satisfaction to hear the shot immediately roll out upon the floor. The young lady gradually recovered, and enjoyed tolerably good health for many years; she married, and had several children, but was subject to frequent attacks of hæmoptysis, and ultimately died of phthisis. Whether the sojourn of the shot, which had been rendered somewhat rough by the previous chewing, laid the foundation of this untoward occurrence, it would be impossible to determine.

CASE XV. *Death from inhaling a chicken bone.* By Peter Gilroy, M. D. Edinburgh Med. and Surg. Journal—American Journal Med. Sciences, 1831, vol. viii.

A widow lady, æt. 40, of a robust habit and previously remarkable for strength of constitution, was seized, while eating her dinner, on the 8th of August, 1826, with a sudden and violent fit of coughing, threatening suffocation. On recovering, she told some friends who dined with her, and who were greatly alarmed for her safety, "that a chicken bone had gone wrong, and still was sticking in her chest." By this time, however, she breathed freely, and her alarm gradually went off.

The next day she felt her chest oppressed, and complained of a slight tickling cough, with inward soreness at the top of her sternum, and general uneasiness.

She sent for an intelligent apothecary, who, conceiving her illness to have arisen from exposure to cold, took some blood from the arm, and directed

aperient medicine, by which treatment she was so much relieved, as to be able to go, in a day or two afterwards, some miles into the country; but the cough and other disagreeable sensations continued, though in a less degree than before. These symptoms had increased at the end of a fortnight, but were again mitigated by a second venesection, and by a repetition of the aperients.

On the 13th of September, about five weeks after the accident, I saw her for the first time, in consequence of a further increase of the symptoms. I found her in bed, with her shoulders particularly low; her countenance was anxious, with great despondency; pulse 96, full; tongue loaded and yellow; some appetite. She attributed her illness to the same cause as before, and referred the seat of pain to the top of the sternum, towards the right side, where she felt confident the bone still remained.

I was struck with the manner in which she lay in bed, and inquired the cause. She told me "that, as long as she remained perfectly quiet, with her shoulders depressed, she was free from cough; but as soon as she raised herself in the least, or turned on either side, a violent fit of coughing came on, which she could excite when she pleased, by placing herself in the first-mentioned position."

The truth of her assertion was soon verified, as she had occasion to elevate the body considerably: and the fit which immediately ensued, was more violent and more convulsive, if I may use the expression, than any paroxysm of spasmodic asthma I had ever seen. On such occasions she usually experienced a difficulty of expectoration, as if from some mechanical obstacle, and an intolerable fetor from the throat was perceptible, not only to herself, but also to those about her.

From the above facts, I had no doubt that the bone had fallen into the trachea; but as suppuration had taken place in the lungs, accompanied by hectic fever, little could be expected from the resources of art.

She lingered until the 29th of October, and then died, exhausted by pain, irritation, and discharge. From the period of my first visit, she could scarcely move in any direction without the occurrence of a most violent cough, apparently about to end, every moment, in suffocation.

On examining the thorax, twenty-four hours after her decease, a large abscess was found in the centre of the right lung, the greater part of which was occupied by it. The cavity of the abscess contained about twenty ounces of pus, of a reddish-brown color, and very fetid odor. The piece of chicken bone (very light and porous, and weighing only six grains) lay in the superior part of the right bronchus, close to the bifurcation of the trachea: this tube here communicated with the upper part of the abscess.

CASE XVI. *A fatal case of a pebble in the bronchus.* By Prof. Samuel Solly, Surgeon of St. Thomas's. *Lancet*, 1849.

In this case a navigator drew into his windpipe the pebble which he had placed under his tongue to relieve thirst while working on the railway. He applied first to Mr. Passmore, of Pullin's Bar, who, after making him stand on his head, and taking other measures to relieve him, proposed the operation of tracheotomy; but the man preferred coming up to London. On his admission into St. Thomas's, under the care of the author, his condition is thus described: When recumbent, and entirely at rest, he was free from cough and unconscious of the presence of the stone; but severe cough was induced if he moved about much, and he fancied the stone changed its position. He lay either on his back or right side, an attempt to turn on the left side producing great dyspnoea, with cough and impending suffocation: he referred to the position of the right bronchus as that occupied by the stone, and occasionally

experienced a sore and pricking sensation at the same spot. On examining the chest with a stethoscope, the author found the respiratory murmur loud, but otherwise natural, on the left side. On the right, there was a loud cooing sound about four inches below the clavicle; below this, and over about three square inches, there was no respiratory murmur audible. These signs, however, varied, and at times the author could distinguish the sound accompanying the ingress of air at every part of the chest. Dr. Cohen found the respiratory murmur absent, one inch beneath the nipple on the right side, whilst percussion elicited over the same part a clear sound. After the patient had been in the hospital a few days, he was bound to a table, inverted, the operator frequently striking him on the chest and back with his hand. The dyspnoea and spasmodic cough forbade the maintenance of this position beyond forty or fifty seconds. This inversion of the body having produced no effect on the position of the stone, it was determined to open the trachea, which was done, and the man again inverted without dislodging the stone; but severe bronchitis was produced, which was twice subdued by repeated cupping, and the use of mercury. At last, the patient suddenly left the hospital, and returning to Holloway, died eight days afterwards. Two days after he left the hospital, he was seized with a violent fit of coughing, and was nearly suffocated. He declared at this time that the stone had changed its position. He had three more convulsive fits shortly before his death; and the expectoration was very profuse through the last week of his life. The post-mortem examination, which was conducted without the author's knowledge, revealed extensive pleuritic inflammation and suppuration in the pleura on the left side, and abscess of the substance of the lung on the right side. The stone was firmly wedged in one of the first divisions of the left bronchus, but there was no ulceration of the mucous membrane around it, indicating that it had been long resident there. It weighs 114 grains; its long axis being three-quarters of an inch, and its short axis half an inch. The author remarked that he was prepared to use forceps for the extraction of the stone; but as the introduction of a long steel probe produced such violent spasm, without affording any information as to the position of the foreign body, he did not consider himself justified in employing them. The force would have rendered it next to impracticable to have seized it with forceps, had the attempt been made. There seems no doubt that the fatal event was accelerated by the patient's returning to his accustomed stimulants after quitting the hospital. The author is further of opinion that the history of the case, and the post-mortem appearances, justify the assumption that the stone was ejected from its original position when the fit of spasmodic coughing came on two days after he left the hospital; and that it immediately afterwards passed into the left bronchus, where it was found after death.

Mr. Solly, in reference to the preparation which was exhibited to the Society, and in which the pebble was not in the bronchus, said that when first examined, the pebble had been so firmly wedged in its position, that the tube required to be squeezed below in order to dislodge the stone. He regretted that no portion of the right lung had been sent with the preparation.

CASE XVII. A spike of oats introduced into the bronchus, discharged through the walls of the chest. Gaz. Médicale de Paris—Med. Examiner, vol. ii., 1839.

A young woman, aged twenty, was brought into the Hôpital Cochin, July 16, 1834. It appeared that she had for some time labored under consumptive symptoms, and that, a fortnight before her admission, she accidentally swallowed (as she thought) an ear of wild oats, in the act of speaking with it in

her mouth: she could not tell which end of the spike went down first. She was immediately seized with a violent fit of choking; which, however, soon went off and was succeeded by continual convulsive coughing. After two or three days she was attacked with pneumonia of the right lung; and, two or three days subsequently, a sudden fit of coughing was followed by an abundant purulent expectoration of a very fetid matter, which continued till the time of her admission into the hospital. Upon examination, an abscess was detected in the right lumbar region. This abscess was opened by means of caustic, and twelve ounces of purulent matter, resembling that expectorated, was evacuated. Considerable relief of all the symptoms followed this discharge; but cavernous and amphoric respiration, with pectoriloquy, could be heard at the base of the right lung. Subsequently another abscess formed between the ribs, a little below the inferior angle of the scapula; which, after a month, was also opened with caustic. A seton was introduced into the lower opening of the first abscess, and brought out at the newly-made one: by drawing the cotton upwards, the oat-car was entangled and brought out, broken into two pieces, which, together, measured three inches in length. After the removal of the foreign body, the wound kept discharging for a considerable time, but ultimately healed, and all the symptoms, both general and auscultatory, decreased; but the frequent pulse and night-sweats remained, and the patient died from phthisis seven months after coming into the hospital.

On examination after death, extensive tubercular disease of the summit of both lungs was found. The lower and back part of the right lung was closely adherent to the ribs by a hard and almost cartilaginous substance: this was continuous with a mass of dense cellular tissue, which descended beneath the pleura costalis, and passed out of the chest between the eleventh and twelfth ribs, close to the outer edge of the sacro-lumbalis muscle, and was continued beneath the lumbar fascia, which was separated from the muscles for the space of one and a half or two square inches. The cavity thus formed was lined by a soft, unorganized, false membrane; it did not communicate with the chest, but led by a small fistulous passage to one of the external openings; the ligamentous adhesion was closely applied to the pleura covering the lung, and at that point a small cylindrical canal was found, which communicated with the largest bronchial tube of the inferior lobe of the lung: the canal itself seemed formed by a dilated bronchus. The surrounding substance of the lungs was friable, and of a grayish-brown color; but almost free from tubercles, only one being found.

CASE XVIII. *A broken nail in the right bronchus; tracheotomy; its ejection by cough.* By E. H. Davis, M. D., Prof. of Materia Medica and Therapeutics in the New York Medical College. *American Med. Monthly*, 1854.

In the summer of 1846, a boy, eight years old, was playing on the tongue of a wagon with a broken nail in his mouth. In falling over the pole, he drew the nail into his trachea.

Various physicians in the neighborhood were consulted, who were sufficiently convinced of the presence of a foreign body to recommend an operation. Accordingly, on the third day after the accident, he was brought to me for that purpose. I found him laboring under some difficulty of respiration, especially in the right lung. But as the stethoscope revealed nothing, and the symptoms were not urgent, I dismissed the patient, with directions to assume an inverted position during the paroxysms of coughing, in hopes the foreign body would be spontaneously dislodged.

Ten days afterward, he returned with the symptoms so much aggravated that, after consultation with some medical friends, I determined to operate.

As the substance was iron, and from all the symptoms, had settled down into the right bronchus, we procured a pair of forceps, with long and delicate blades, especially for the occasion.

After opening the trachea in the usual way, I made several explorations in hopes of finding the foreign body, but without success. The irritation was so great on introducing the forceps, that we desisted from further attempts until the following day, when we were still unsuccessful. The wound was then lightly dressed, and the patient sent home, with the following directions: That, during each paroxysm of coughing, he should incline his body forward, with his head downward, and be struck with violence between the shoulders.

On the ninth day after the operation (and whilst in the position recommended), the patient coughed up the head of a tenpenny nail, with about three-quarters of an inch of the body attached. It was firmly inclosed in a globe of mucus. He then rapidly recovered, and has remained well for years.

CASE XIX. *An eightpenny nail in the bronchus; tracheotomy; its subsequent ejection by cough.* By Calvin Jewett, M. D., of St. Johnsbury, Vermont. Boston Med. and Surg. Journ.—Southern Med. and Surg. Journ. vol. ii., 1838.

The necessity for the operation was caused by the lodgment of an eightpenny cut nail in the right bronchus, below the bifurcation of the trachea. The subject was a child three years old.

The symptoms manifested by the patient from the time of the accident had been frequent irritative cough; sometimes, though seldom, approaching to suffocation. He continued to run about the house and out at the door for two or three days; his cough and difficulty of breathing becoming now more urgent, it was concluded he had taken cold. His appetite failed him from the day of the accident; and though he could now and at all times swallow either fluids or solids without the least difficulty, his principal diet was milk. Once, and once only, he had puked.

This accident occurred on the evening of the 10th December. "Now," says Dr. Jewett, "full nine days since the accident, he is cheerful, though unable or unwilling to walk; pulse one hundred in a minute, breathing a little hurried, tongue clean, has frequent paroxysms of coughing, which last from a few seconds to one or two minutes. Breathing, or disposition to cough, not affected by posture, yet he chooses to have his head elevated, and to recline only on the right side. Sleep is frequently interrupted by coughing. Cathartics, expectorants and anodynes had been presented by Dr. Brown, the attending physician. Though very intelligent for his years, he complains of no pain, and when definitely inquired of, he acknowledges no pain or disagreeable sensation in any point you refer him to. Placing the hand over the region of the right lung, either anteriorly or posteriorly, it gives a sensation like crepitus; to the ear it communicates a peculiar hissing sound, neither of which can be heard or felt over the left lung. These sensations were communicated both sleeping and waking, yet more distinctly when coughing."

Drs. Jewett, Brown, Newell, and Spaulding, the whole consultation, concurred in the opinion that the nail had passed into the trachea, and not into the œsophagus; and that it was below the bifurcation of the right bronchus.

December 21 (continues Dr. Jewett), I was again called to Mr. B.'s, where I met Drs. Brown, Spaulding, Alexander and Densmore. The little boy's strength fails; he has become restless, and much more irritable than when I saw him before, not willing to have his pulse felt or to submit to any examination. All the physicians agreeing in opinion, the parents decided to have the child submitted to the operation.

Being provided with a pair of long and very small forceps, made expressly for the purpose, of soft iron that could be bent to any desired curve, silver wire in loops, and all the variety of instruments which it was thought possible might be needed, we proceeded to the operation. On a table of convenient height, suitably covered, we placed the boy, his head being bent over a fold of cloth, and projecting beyond the table. From the bloated state of the neck, the smallness of the trachea, and the enlarged veins, the direction of some being such that they could neither be avoided or pushed to one side, some two or three ounces of blood were lost, and one ligature had to be applied. A long time was occupied in making the dissection and opening the trachea, of which three or four rings were divided down as low as possible.

Should I say we were near one hour from the time of placing our patient on the table, until I cut through the trachea, I should not be far from the truth. Let those who think it a very easy matter, and quickly to be done, once have the trial on the *little* living subject, who has been breathing with difficulty, and coughing nearly to suffocation for ten or twelve days, and after such a trial they may speak with more certainty.

Not expecting the nail would be forcibly ejected, as may be the case with light substances, a blunt probe was introduced down into the right bronchus, and the nail distinctly felt at the depth of about four and a half or five inches below the top of the sternum. I now tried the forceps, but before I could fix on the nail, the spasmodic action was so severe as to threaten immediate suffocation, and I was compelled to desist and withdraw the forceps. Again and again I tried the long forceps, other forceps, the wire loop, &c., but tried in vain. Drs. Alexander and Spaulding ably seconded my efforts, and more than once and again tried with various forceps and instruments, and with the like result.

Nearly two hours had now passed since the little boy was placed on the table, having been raised up frequently to take his drinks. During the whole process he made no resistance, and never cried, though often threatening to "tell pa," if we would not let him alone.

Our patient now appeared much exhausted, and we desisted from any further attempts to remove the nail, for one hour, during which time he rested quietly and slept some. We again made repeated trials to remove the nail, but without effecting our purpose, and were compelled, most reluctantly, to say we could not remove it; painful and humiliating as was this avowal, make it we must.

When the opening was made into the trachea, considerable viscid mucus was thrown out through the wound; and the night following, I tarried with him and found his breathing much freer than before; he coughed less, and rested better than usual. The dressings applied were simply strips of adhesive plaster.

I now leave the history of this case, December 24th, expecting to learn, in the course of a few days, of his death, and the dissection, which will show the exact situation of the nail.

Sequel to bronchotomy.—Under date of Feb. 6th, I received from Esquire Belden, the history of his son's case from the time of the operation down to date.

He says: "The air ceased to escape through the incision in thirty hours, and his breathing continued better than before the operation. About the 20th of January, he had the appearance of having taken a cold; his cough became more troublesome, with much phlegm. On the morning of January 23d, about 6 o'clock, his cough was still more severe, giving a different sound from that at any time previous; it was harsher, sharper, and resembled the

barking of a fox. I hastened to light a candle, but before I could do this and return to the bed, William says, 'Pa, I have coughed the nail up.' I stepped to the bed with my light, and in a streak of phlegm and blood lay the nail, directly before his mouth on the pillow, the head from him. I viewed it attentively before touching to see if I could discover any matter (pus), but saw none."

Since the above date of February, I have seen both father and son; the boy appears well and hearty, his cough has entirely subsided, unless when he is much irritated he coughs a little. Contrary to what was the fact before, he now, since raising the nail, lies on either side, or on his back, with equal ease, and his head low; whereas, before, he could lie only on his right side, his head very high, or occasionally for a short time he would lie directly on his face.

That there is not a similar case, as it regards form, weight, etc., of a child so young, having received such a weight into his lungs, and thrown it up by coughing, I will not venture to assert, but if such a case has occurred, it has escaped my notice if reported.

CASE XX. *Removal of a bell-button from the right bronchus.* By Mr. Dickin, of Middleton, near Manchester, England, 1832. *Chelius's Surgery* by South, vol. iii.

A boy of eight years, who having "found a bell-button, which he placed in his mouth, and during the act of jumping, it passed backwards into the windpipe. He instantly fell down, to all appearances in a state of suffocation, and was taken home, a few yards distant, making the most violent efforts to respire; after which his breathing became easy, but with repeated dispositions to cough, which alarmed him, threatening instant suffocation. * * * He complained of a sense of constriction across the chest, * * * had fits of coughing, which came on at intervals of two or three hours, during which he was comparatively easy. The face presented a purplish hue, with great anxiety depicted." Three days after, on examining the chest, its "appearance was most remarkable. On the right side a loss of symmetry, with evident depression and altered action in breathing. The stethoscope indicated no respiratory murmur: whilst on the left side there was the plump symmetrical beauty of a youthful chest, with the common action of that side in respiration. * * * On the sixth day, the cough ceased, and also the fits of suffocation, which evidently indicated a fixed position of the foreign body." On the tenth day, it was determined to perform laryngotomy between the cricoid and thyroid cartilages; which done, a pair of forceps invented for the purpose were introduced, and "acted as a sound, for on their introduction Dickin detected the presence of a metallic body. They were introduced again without the slightest inconvenience to the patient (at least apparently so), when again the point came in contact with the button, which was laid hold of, and removed in their grasp. * * * For several days a considerable quantity of muco-purulent matter was discharged through the wound, having accumulated around the button in the *bronchus*." In a fortnight the boy was well, and returned to school.

CASE XXI. *Extraction of a piece of bone from the bronchus by tracheotomy.* By the late distinguished Prof. Liston. *Lancet*, 1834, vol. xxvi.

Mrs. R—, ætat. 37, admitted into the Royal Infirmary, Edinburgh, on the 12th of May, 1833.

On the 1st of November last, while swallowing some mutton broth, she felt a small piece of bone get entangled about the root of the tongue. In making

some violent attempts to extricate it by coughing, it passed, during an inspiration, into the larynx. Immediately on its entrance she was seized with a severe fit of coughing, a sense of impending suffocation, and a sharp pain, referred to the right side of the larynx, about the cricoid cartilage. The fit of coughing continued for two or three minutes, and then ceased entirely; the respiration became comparatively easy, and she felt the substance passing down the trachea, the pain following it, and leaving the parts where it was first perceived. It appeared to lodge at the upper part of the sternum beneath the right sterno-clavicular articulation, and gave rise to much annoyance, from difficult breathing, noisy inspiration, and a painful sense of rawness felt there when coughing. The dyspnoea has continued to be extremely troublesome since the accident, and to be increased by the least exertion. It has been particularly urgent during changeable weather, and her sleep has been all along much interrupted by it. From the time of the accident until about three months ago she had no return of the cough, but about that period she had three or four violent fits during one day, produced, as she describes it, by the feeling of the presence of a foreign body in the trachea, at the upper part of the sternum, rather to its right side. After this the dyspnoea became extremely urgent, but she had no further uneasiness from the cough until about three weeks since, when it again returned with increased severity, and continued to be very distressing until a few days before her admission into this hospital. She has consulted several medical men, both in the country and in Aberdeen, but they all looked upon her complaints as being either asthmatic or imaginary, and refused to employ any but palliative means. During a slight remission produced by these, she came to Edinburgh and applied to Mr. Liston, to see if anything could be done towards the removal of her complaints.

The following was her state on admission: The respiration was stated to be more tranquil than it had been for some time past, an improvement ascribed to the application of a blister about ten days previously. It was not much hurried, but became so after very slight exertion, even, at times, by speaking a few words continuously. It was noisy and stridulous, particularly during inspiration. The chest all over was natural on percussion, and the vesicular murmur was unattended by any morbid sound, except a little below the sternal end of the right clavicle, where, when the respiration was at all hurried, there was, over a small spot, a pretty loud sonorous râle. The sound was heard over the superior angle of the right scapula. In other respects both sides of the chest were perfectly natural, and the respiratory murmur was equal in both.

There was no complaint of pain, but the same sense of rawness formerly mentioned was still felt on coughing, and during her attempts at expectoration. Her sleep is still disturbed by the difficult breathing. Towards morning she occasionally expectorates a mucous fluid tinged with blood, and in her attempts to discharge it, she feels as if it were obstructed by something acting as a valve a little below the right clavicle. Deglutition is unattended with any pain or uneasiness. Her appearance is expressive at times of considerable anxiety, and she feels assured that the foreign body is still lodged in the air-passages, and places her finger over the spot where she supposes it to have been fixed all along. Her general health is not much impaired.

Mr. Liston, from her own account, and from an investigation of the symptoms on her admission, was of opinion that the body still remained, and was the cause of her distress; and from the knowledge that, on account of the greater size of the right bronchus, and the more obtuse angle which it forms with the trachea, foreign substances most frequently pass into it, and also from the indications afforded by auscultation, he was satisfied that it was lodged in

it, and entertained strong hopes of his being able to remove it by operation. The patient herself was willing to submit to anything for relief.

On the 14th the usual operation of tracheotomy was performed, and after a little delay, to allow the irritation produced by the admission of a drop or two of blood into the trachea to subside, a gunshot probe was passed down to the right bronchus, and the bone was immediately struck. A pair of curved forceps was then introduced twice, but as the body could not be grasped by them, another pair of a different construction was tried, by which it was at once seized. In the first attempt to extract it, it escaped from the forceps, but on the second it was brought out without much difficulty. The passing of the instruments produced violent fits of coughing, with heaving of the chest and lividity of the face. The removal of the bone gave instantaneous relief, the respiration became perfectly calm and easy, and the stridulous inspiration ceased entirely. The patient submitted to the operation with great fortitude, and nothing could express her joy at its happy termination. Immediately after the operation, the wound was dressed with lint moistened with warm water, which was frequently renewed. In the evening, when the oozing from the incisions had entirely ceased, its edges were brought together, and retained by means of the isinglass plaster.

May 15. States that she has slept better during the last night than she had since the accident; the wound is looking well, and a small quantity of air passes only occasionally through it. The respiration is now perfectly easy and natural, and her only complaint is of some slight uneasiness on deglutition, referred to the cut surfaces. Bowels open; pulse calm, 88; skin moist.

On the 16th the air had ceased to pass through the opening, and everything promised well. On the 17th there was a little redness and swelling around the wound, and on the 20th a small quantity of pus was discharged from its lower part. From this time everything went on favorably, and she left the hospital on the 23d, as well, in every respect, as she had been before the accident.

Mr. L. had ordered to be made, before operating, two different pairs of forceps fitted for seizing the bone in whatever direction it happened to be impacted in the bronchus, whether it lay with its edges pointing antero-posteriorly or laterally.

CASE XXII. *Removal of a nail from the left bronchus by tracheotomy.* By Paul F. Eve, M. D. Nashville Journal of Med. and Surg., 1853, vol. v.

On the 20th of June, the Rev. Mr. Lane, residing near Talladega, Alabama, came to Augusta, seeking professional advice for his little son, who, two weeks previously, had placed a fourpenny nail in the hole of a cotton spool with the design of making a whistle, but unfortunately in taking a deep inspiration it passed with the air into the windpipe. There was evidence that this foreign body was still in or near one of the bronchi. The child is five years old, of excellent constitution and good health.

The usual distressing symptoms followed the introduction of this extraneous substance into the air-passages, and efforts were immediately taken for its expulsion. Emetics were given; the patient was held up by the heels, and stricken repeatedly between the shoulders and on the sternum; but these means failed.

Drs. Ford, McKie, J. A. Eve, Henry and Robert Campbell were the consulting physicians called in to the case here. There was a large bronchial rhonchus, distinct at a distance, in both lungs, but chiefly in the left. There were also different degrees of sibilant rhonchus, alternating with the moist. This examination could not, however, be critically made, owing to the extreme repugnance of the patient and his consequent restlessness. The foreign body

was not large enough to occlude one bronchus; and besides, the irritation created by it might readily have extended into both, in the space of two weeks, that interval having now elapsed since the accident occurred—so that the exact location of the nail could not thus be determined. There was a cough with some expectoration every morning, and occasional dyspnoea, especially after exercise. The disturbance to his general system was but slight; his appetite was good and he went about as a child without restraint.

After watching the case for a few days, we came gradually but unanimously to the conclusion, to recommend the operation of tracheotomy for the removal of the nail. It is proper to state that the possibility of acting upon it through the agency of magnetism was duly considered and experiments performed with this object, but leading to no available practical results. The forceps used in the case was magnetized, but exercised no perceptible influence in the extraction of the foreign body.

On the 27th, kindly and efficiently aided by the professional gentlemen above named, and by Prof. Means, who administered chloroform, Drs. Broadhurst, Dearing and Simmons, the operation was performed as follows: The patient having the neck made prominent by a pillow under it, the integuments were raised in a fold over the *trachea* and divided from within outwards to about two and a half inches in length. The dissection was then cautiously continued upon the median line with the handle of the knife, forceps and director; passing the platysma myoides (not recognized however), areolar tissue and adipose matter; between the sterno-hyoid and sterno-thyroid muscles; and opening the tracheal fascia described by Porter of Dublin, the windpipe was exposed at about its 5th cartilaginous ring. At this point of the operation the two middle thyroid veins, running directly from the thyroid body or gland as it is commonly called, into the *venæ innominatæ* were greatly exposed, and at every struggle of the patient or difficult respiration would become largely distended. By means of blunt hooks all the soft parts were carefully held aside, and no important vessel was injured. The whole bleeding was probably less than an ounce, and proceeded from the first or superficial incision. It was quite a bloodless operation, considering the region involved, and may be attributed to acting rigidly upon the principles to keep directly upon the median line; to have the cutting edge of the knife always turned upwards; and to be ebery even with its point in laying bare the trachea. Thus fully exposed, a hook secured the windpipe, while some three or four of its rings were rapidly slit open with a small knife, turning its back as much as possible towards the vertebræ. Trousseau's tracheal forceps were now introduced, and between its expanded blades other curved forceps were passed down into the right bronchus. These latter instruments were made in this city by Mr. J. D. Smith; are of different lengths, varying from three to seven inches in their narrow legs, and have considerable curvature near the handles or rings. Each introduction of them was attended with slight spasm, but which the subsequent manipulation (gentle of course), in the bronchial tubes did not increase. Closed and used as a probe, these forceps were carried into the right bronchus, but their handles coming in contact with Trousseau's instrument holding open the wound, I could not determine if the nail had been touched. Calling for a probe, Dr. H. Campbell passed it down and readily detected it on the left side, where it was at once seized and extracted with the forceps. From my position to the right of the patient, and the hand sustaining his head being placed under the right side of his chin, the right bronchus was easiest penetrated. To find the object searched for, I had to request the assistant holding the patient's head to withdraw his hand, while I passed my right hand carrying the forceps to the right of the neck. I am thus particular to prove

that the nail must have been in the *left* bronchus and not in the right, as is almost invariably the case with extraneous substances passing down the wind-pipe, especially if they be, like this one, ponderous. The body removed could not have been more than two inches below the top of the sternum; was at an angle with the perpendicular line; and situated more anteriorly than I expected to find it. Its head was downwards, and is very rough. It measures nearly an inch and a half in length and is slightly oxydized.

The patient was about half an hour on the table, some portion of which time was consumed in waiting for all bleeding to cease before the trachea was opened, and also by his vomiting freely; the stomach having been filled, by misplaced kindness, to prepare him for the operation, and contrary to all expectation. For success in the case, I am greatly indebted to *chloroform*, which was admirably regulated to an extent sufficient for all purposes, yet never once producing stertorous breathing—to Dr. Ford for insisting that the extracting forceps could be curved greater than I intended—to Dr. Henry Campbell for so readily touching the nail with a probe—and to Trousseau's tracheal forceps for keeping the parts dilated when cut open. Climate and season too, no doubt had their influence over the happy result. The operation was performed in an open piazza, with the thermometer at 84°.

The after-treatment of the case was of the simplest character. Two sutures applied to the skin had to be removed on account of threatened emphysema, and all dressing to the wound omitted, owing to the alarm of the patient recovering from chloroform. Two hours after the operation he was taken in a carriage to his boarding-house, distant from mine two and a half squares. During the after part of the day, bloody mucus was still discharged with air through the tracheal factitious opening whenever he fretted or cried; but when composed he breathed altogether *per vias naturales*. At 8 o'clock P. M., he was sleeping quietly and had less mucous rattle.

June 28, 6 o'clock. Has had a good night. Has very little fever. The wound was partially closed at 11, and effectually at 7 P. M., with isinglass plaster. The lungs are much freer and the respiration improved. The diet, up to this period, has been iced lemonade, and milk and sugar, the latter his favorite and accustomed nourishment.

29th, 7 A. M. Is doing well; but at 11 has considerable fever. Prescribed calcined with the sulphate of magnesia. This being vomited, salt water enemata were directed. 8 P. M., the fever has abated, but the prescriptions have not been carried out, and there has been no action yet in the bowels. The wound remains closed, and his cough has ceased.

30th. Patient is down stairs and it is difficult to keep him in doors. His bowels have been moved twice. The wound was dressed, found healed internally, leaving the skin ununited.

July 1. Has left by railroad for the country.

2d. Came in to have the wound dressed; it is nearly healed, but the cicatrix is a little irregular.

4th. Left for home.

Recapitulation of case.—Patient aged 5 years. Gets a fourpenny or shingle-nail into the left bronchus, from which it is removed through an opening in the trachea by forceps, three weeks after its sojourn in the air-passages. Within four days after the operation he goes into the country and fully recovers, for he has been heard from several times after the above date.

CASE XXIII. *Introduction of a puff-dart into the left bronchus; ejection with pus, by coughing.* By R. S. Nunn, M. F. S., Surgeon, England. Ranking's Abstract, 1849.

Henry Taylor, a stout florid young man, groom to the Rev. Mr. Herring, of Fordham, was admitted into the Essex and Colchester Hospital, at half-past five in the afternoon of the 1st of March, 1845. His appearance indicated considerable constitutional disturbance, his countenance being anxious and suffused. He was suffering from great dyspnoea, and frequent short cough, which produced pain about the upper part of the sternum. His breathing was hurried and difficult, but his pulse not very excited, being only 84 per minute.

He states that, while playing at a game called "puff-dart," one hour previously, in making a deep inspiration preparatory to blowing the dart through the usual tube, he inspired the projectile, which was formed of a nail, wrapped round at one end with worsted, and of which the accompanying cut is an accurate representation.



On examination by the stethoscope, the only specific sign distinguished was a loss of the respiratory murmur on the left side. He was ordered: Hydrarg. chlor. gr. v;

pulv. jalapæ gr. x. Fiat pulv. hac nocte sumend.—Haust. sennæ, cras mane. Low diet.

2d. He passed but an indifferent night, sleeping soundly, however, at intervals. There was but little alteration in his breathing; his pulse was rising, and his tongue coated; the bowels had been freely opened. On percussing the chest, it was found that the right side was resonant, and as it should be, whilst there was very decided dullness in the upper part of the left side, more particularly in front, and no respiratory murmur was to be heard in any part of this side of the chest: R.—Liq. ant. pot. tart. ℥xx; mist. salinæ ʒj. M. fiat haust. tertiâ quâque horâ rep.

3d. Slept but little during the night, and the expression of his countenance still anxious; his skin hot, harsh, and dry: pulse 112, and no improvement in the chest symptoms. His bowels had not been relieved, but the first dose of the antimony had produced vomiting, which relieved him for awhile. He had expectorated some glairy mucus, and slight crepitation was heard at the inner part of the subclavicular region of the left side: Venesectio ad ʒxij. Adde liq. ant. tart. ℥x, sing. haust.

4th. Slept better; spoke of himself as being more comfortable, and the expression of his countenance was less anxious. His bowels were opened twice; pulse 112; had coughed up about an ounce of mucus. The dullness on percussion was more circumscribed, and the crepitation more distinct and general.

5th. Was much the same, but the expectorated mucus was frothy; countenance less indicative of suffering.

6th. His expectoration was slightly tinged with blood; he was restless, and his pulse 96: R.—Tinct. opii ʒss; haust. salinæ ʒj. M. fiat haust. hac nocte sumend.

7th. This morning he was altogether better, his pulse had dropped to 84; he had passed a good night, and his cough troubled him but little.

He gradually improved, after this time, until the 17th of April, when he was made an out-patient.

I lost sight of him from this date until the evening of May 2d, when I was sent for by his friends in the greatest haste, the messenger expressing his belief that my patient would be dead before I could reach Fordham. I found him in a state of extreme collapse, covered with a profuse and cold perspiration; his breathing was scarcely perceptible, and he was pulseless at the wrist. On inquiring into the cause of this state, I found that he had been suddenly seized with a violent fit of coughing, and had brought up a large quantity (nearly a quart) of pus, which had been thrown away on to a dung-heap. On search being made, however, the cause of all his trouble was found, covered with pus and extraneous matter. I have kept it to this day, and am happy in having an opportunity of showing it to you.

He rallied after a little time, stimuli having been given freely, and heat applied externally, when I was enabled to examine the state of his chest. I found puerile breathing on the right side; and pectoriloquy with gurgling over a considerable extent, midway between the clavicle and the nipple, on the left side—in fact, every evidence of a large cavity, communicating with a bronchus, and containing more or less fluid. His pulse was at 140, and he shortly began to suffer from restlessness and cough.

I ordered him to be well watched, and to be kept very quiet, to have nothing but warm milk to drink, and gave him an anodyne.

I visited him on the following day. He was still restless, but his state was slightly improved. Pulse, 130. He had expectorated about a pint of matter between my visits. Continue same diet: R.—Liq. morph. acet. ℥iv; tinct. hyosey. ℥xij; vin. ipecac. ℥vj; mist. camph. ʒj. M. fiat haust. sextis horis sumendus.

The next day, I found him better. Pulse 114. He had not so much constitutional disturbance, and his cough was less frequent. He gradually improved. His restlessness and hectic left him after awhile, his expectoration by degrees diminished in quantity, his pulse fell to 90, and, after the exhibition of tonics under better diet (which, through his good luck in having a liberal master, could be regulated according to circumstances), he left his bed, and slowly and cautiously returned to his accustomed employment, suffering much, however, occasionally, from shortness of breath, and pain in the left side of the chest; but these symptoms entirely disappeared after a time, and when I saw him, with my friend Dr. Duncan, we both agreed, after carefully examining him, that he was in robust health—that his respirations were quiet, slow, and equal—that his pulse was quiet and regular—and that he had no cough: that, in one spot, midway between the left clavicle and nipple, and towards the sternum, there was more blowing breath-sound, and more vocal resonance, than natural. There was no difference in the relative expansion of the sides of the chest, and the left side was neither contracted nor drawn in on respiration; in fact, there was evidence of a small bronchial dilatation, but of no further abnormal condition, and he is now able to do the work of an able-bodied laborer.

CASE XXIV. *A set of false teeth found in the chest, having been swallowed and, it is conjectured, passed through the lung into the pleural cavity.* Mr. Carpenter in Guy's Hospital Reports—Dr. Gross' Work.

A man, aged thirty-five, an assistant in a chemical establishment in London, and an habitual asthmatic, swallowed, thirteen years ago, in a fit of coughing, a piece of ivory, wrought into four artificial teeth. The morning after the accident, he was advised to take an aperient, on the supposition that the foreign body had passed into the stomach; and, as there was no material increase of suffering, or inability to attend to his usual business, it was natu-

rally concluded that the substance had been voided by the bowels. The circumstance was, therefore, gradually forgotten.

From the time when Mr. Carpenter first saw the patient, in the winter of 1841, until his death, a few months after, he was never free from fever. His pulse was always above one hundred, the skin was hot, and there were other symptoms of inflammation, which continued, without any intermission, until the following spring. On the 13th of April, he was seized with acute pleuritis in the right side, attended with excessive pain, distressing cough, and dulness on percussion on the anterior and posterior parts of the chest, with absence of the respiratory murmur. To relieve these symptoms, blood was taken from the arm, and the bowels were moved with calomel, antimony, and colocynth. Subsequently, cups and blisters were employed, with various other remedies unnecessary to be specified. Death occurred on the 19th of April, about five days after Mr. Carpenter began his treatment.

On opening the right side of the chest, a very offensive gas gushed out. The cavity contained five pints of sero-purulent fluid; the lung was collapsed, and pressed flatly against the bodies of the vertebræ; and there were thick layers of lymph both on the pulmonary and costal portions of the pleura. On the outer surface of the lung was an old fistulous opening, large enough to admit the tip of the little finger, but not communicating with the bronchial tubes, or the interior of the organ, which contained a number of tubercles, some of them in a state of suppuration. The four artificial teeth, represented



in the annexed sketch, were accidentally found, after the examination was completed, in the right thoracic cavity, in sponging out the blood, and replacing the lung. They were covered with a brownish crust, and furnished with silver rivets, by which they had been adapted to the upper jaw.

The left lung was emphysematous, and contained miliary tubercles. The corresponding pleura was healthy; but the smaller bronchial tubes were filled with mucus. The heart was sound.

Mr. Carpenter supposes—and the conjecture is very plausible—that the foreign body, in this case, gradually passed through the substance of the right lung by ulcerative action, and at length escaped into the right pleuritic sac, where its presence gave rise to the violent inflammation which immediately preceded dissolution. The fistulous opening, above alluded to, was, doubtless, the remains of the track pursued by the ivory. It is very remarkable, as observed by Mr. Carpenter, that the man never had any hæmoptysis.

May there not be another conjecture in reference to this foreign body—that it passed through the œsophagus, and not the lung?

CASE XXV. *Stricture of the trachea.* By W. C. Worthington, Esq., Surgeon, Lowestoft, England. *British and Foreign Med.-Chir. Review*, 1843, vol. xxxviii.

C. N., aged 49, agricultural laborer, had enjoyed pretty good health. In 1833 he contracted syphilis, for which he took mercury, "not to an immoderate extent." He now experienced cough and soreness of throat, with slight difficulty of swallowing, and decline of health. In August, 1837, Mr. Worthington first saw him. He was emaciated, feeble, had uncasiness about the throat, and made in breathing a noise like that of "a roarer." Each inspiration occupied ten seconds, the chest expanding only six times in a minute. Expiration was performed in much less time than inspiration, with much less exertion and with diminished intensity of roaring. There was violent action

of the hyoid and thyroid museles. Vocalization was very imperfect, and the voice raucous. There was troublesome cough, with a copious muco-purulent expectoration, the checking of which tended in some degree, to increase the difficulty of breathing. The patient complained also of an offensive discharge from the nostrils, followed by occasional exfoliation of osscous matter, which appeared to be connected with disease of the inferior turbinated bones. When the larynx was much compressed there was pain. Slight roughness of the epiglottis felt by the finger—no stethoscopic indication of disease of lungs.

Mr. Worthington thought that little could be done. The patient went on for nearly four years. The peculiar roaring sound and raucous voice never left him. He was generally worse when the atmosphere was damp and cold, and when exposed to the night air. In the winter months he was mostly confined to the house, but as the weather became warmer, he could, if allowed to take his own time, walk about three or four miles in the day. Whatever promoted expectoration, usually produced a temporary relief of the dyspnœa. He described the expectorated matter as having sometimes assumed an arborescent appearance. His death took place on the 15th March, 1841. On the morning of the day of his death, whilst taking some bread and milk for breakfast, some particles of this food fell into the larynx, and he was suffocated in less than five minutes.

Inspection.—Muscles in front of the neck unusually developed. Lungs moderately distended, otherwise sound. Bronchial tubes filled with viscid mucus. Bronchial glands enlarged, one calcareous. Two ounces of fluid in the pericardium.

Trachea.—A singularly well-defined constriction, constituting complete stricture, was discovered just below the cricoid cartilage, the calibre of the strictured portion not exceeding that of a crow-quill, and at once disclosing the principal cause of the distressing symptoms during life. This partial obliteration of the canal was independent of any adventitious membrane, the product of either acute or chronic inflammatory action, as in croupy affections, and of the existence of any of the usual marks of inflammation. The tracheal rings, at the point of stricture, had entirely disappeared, and had been converted into a fibro-cellular tissue, whilst those below the constriction were much dilated beyond their natural circumference, and had also to a certain extent lost their elastic and cartilaginous character. The larynx, when held perpendicularly, presented a more flattened appearance than natural, owing to the approximation of the alæ of the thyroid cartilage. This altered shape may probably be regarded as a consequence of the stricture in the trachea, and it no doubt in some degree added to the difficulty of breathing. The epiglottis showed marks of having been attacked with ulceration at some former period; the only vestiges of it remaining were two or three small irregular vegetations. The lining membrane within the larynx was slightly thickened, pale, and rather thickly smeared with a viscid muco-puriform fluid, but it presented no appearance of ever having been the seat of ulceration.

SECTION V.

FOREIGN BODIES IN THE ŒSOPHAGUS.

CASE I. *Death produced by a piece of bone lodged in the œsophagus.* By Thos. Cock, M. D. New York Med. Repository, 1809, vol. xii.

Mrs. H., aged 73, enjoyed an unusual share of good health, but from age had lost her teeth, and frequently complained of some difficulty in swallowing her food. While dining upon roast beef, being accustomed to swallow without

much chewing, she complained that a piece had lodged in the passage to the stomach, producing considerable distress. Various attempts were made by domestic means to remove it, but without effect. She continued in this situation until the next morning, when a physician was sent for. An emetic was then administered, which had a free operation, but without effecting a removal of the obstruction. At this time she was still able to swallow liquids, but not without difficulty and pain, attended with a constant disposition to reject them. By advice of the physician, a surgeon was sent for the next day, with an expectation to remove the obstruction by means of a probang; this was introduced, and caused a considerable degree of pain. This operation was repeated several times, but without affording any relief. The surgeon afterwards introduced his fingers to their full extent, but was unable to discover any obstruction. Having by these examinations discovered nothing, and the instrument passing freely into the stomach, he left the patient to some general remedies, supposing her complaints to be merely spasmodic. In her present situation, she found it impossible to swallow even the smallest quantity of any fluid, although the desire was constant, and the attempt to gratify it often repeated.

She continued in this situation for thirteen days, without experiencing any abatement of the difficulty and distress which attended every attempt to swallow. These prevented her, during this period, from taking any nourishment; and she continued to endure the aggravated affliction of disease and starvation.

About eight hours before her death was the first time of my seeing her; she was then unable to give any account of her situation; but her friends supposed, that a portion of the beef she had been eating still remained in the œsophagus. They also said that while she could speak, she constantly insisted that something was still lodged in the throat, notwithstanding the operation of the emetic, and the free passage of the instrument. Upon examination of the fauces, there appeared considerable tumefaction about the pharynx, which it was thought advisable to open, and, if possible, give some relief to the unhappy sufferer. This examination was made in the morning, and the operation deferred until afternoon. In the interim, however, considerable alteration had taken place; the tumefaction had subsided by a discharge of extremely fetid matter from the throat. The patient at this time was much exhausted, the extremities were cold, and every other appearance announced approaching dissolution. The discharge of fetid matter continued at frequent intervals until evening, when she died.

From the anxious wishes of her affectionate friends to know the cause of so much distress, they were readily prevailed upon to admit an examination after death. An extensive opening was made upon the side of the trachea, and the sac of a large abscess at once presented itself, containing the same kind of fluid that had been discharged by the mouth before death. This abscess had a free communication with the œsophagus. Upon introducing the fingers into the sac, a fragment of *bone* was discovered, an inch and a half in length, pointed at both extremities, and having attached to it a small portion of ligamentous fibre. This immediately explained every difficulty, and showed the inefficacy of the instrument that had been used to remove obstructions in all cases from the œsophagus, or to determine their existence.

CASE II. *Death from a piece of bone lodged in the pharynx cutting its way into the larynx and, like a valve, obstructing respiration.* By Paul F. Eve, M. D. Southern Med. and Surg. Journal, 1849.

On Saturday, 15th of June last, a colored boy, aged nine years, while

taking beef-soup had a piece of bone to stick fast in the throat. Efforts were immediately made by the family to dislodge it, and these were subsequently directed by two skilful physicians of the village where the accident occurred. The means employed consisted of emetics, the forceps, probang, &c. These attempts having been unsuccessfully renewed the next morning, the little patient was sent with his mother to me, a distance of twenty-five miles. They arrived at my office at 4 P. M.: about twenty-eight hours after the foreign body was arrested in its passage to the stomach.

At this time, there was considerable hoarseness, besides the difficulty of deglutition. The patient had slept some the previous night, and had also swallowed a little water since the efforts made to relieve him. His mother said the foreign body could be felt by the tip of the finger while the mouth was forcibly opened—at least, so she had been informed by the physicians. There was now no cough, neither had there been at any time. By thrusting the fore and middle fingers deep into the pharynx, the sharp, rough projecting edge of a piece of bone was reached, which occasioned an instantaneous and spasmodic action in the muscles of the part, but excited no cough. The forceps and other instruments were now directed against this foreign substance, and it was supposed to have been seized more than once; but after an hour's persevering endeavor to remove it, the case was abandoned for the present. It was only while the patient was firmly held and the mouth forcibly opened (for he was too young to be persuaded to submit quietly), that these attempts for its extraction could be made.

After these latter efforts, the patient never swallowed, not even iced water, and his respiration became more and more embarrassed. He passed a bad night, and seemed much exhausted the next morning. Indeed, it soon became apparent that without relief he could not long survive. Drs. Newton, H. F. and R. Campbell and Dr. Barry saw the patient at 12 M., and as I was engaged in carrying out our decisions—viz., to make one more attempt to extract the bone, and should that prove, like the others, unsuccessful, then to open the pharynx—he expired. A new pair of forceps had only been directed upon the foreign body, when he breathed his last. The larynx was now laid open, and a silver tube introduced into it encountered something foreign. Tracheotomy was next performed, and artificial respiration attempted for half an hour. The heart continued to act, but respiration was not re-established.

Death having thus occurred, the windpipe was freely exposed, when *a piece of bone was found projecting into the larynx below the rima glottidis*, and extending thence through its posterior wall into the pharynx. It was the outer lamina, thin, sharp, having jagged edges and of an oblong shape. It measures one inch by half an inch. The irregular, serrated edges, particularly on one side, explain the difficulty in removing it; and its thin, sharp extremities, the facility with which it cut its passage from the pharynx into the larynx. Did not the means employed produce or promote the entrance of this foreign body into the windpipe? He evidently died from exhaustion, the result of the treatment pursued in the case, and the interference to respiration by the presence of the bone in the larynx, which, when seized, closed the windpipe as a valve.

CASE III. *The cork of a beer-bottle forced into the gullet by carbonic acid gas; œsophagotomy necessary to extract it.* St. Louis Med. and Surg. Journal, 1853.

A man was lately admitted into the Portsmouth, Portsea, and Gosport Hospital, under the following singular circumstances: He was trying to extract a cork from a large stone beer-bottle with his teeth, when it was suddenly

driven into his gullet by the force of the carbonic acid which had been generated in the bottle. Medical assistance was immediately obtained, but unavailingly, and the man was taken to the hospital, where œsophagotomy was at once practised, and the cork, which measured about three inches and a half in circumference, was extracted.

CASE IV. *Lodgment of meat in the œsophagus; its extraction by manipulation.* By W. Henry Thayer, M. D., of Newton Centre, Massachusetts. Boston Med. and Surg. Journal, 1854.

I was called, on the evening of May 27th, to see a lady about 70 years of age, who complained that she was choking from the effects of a piece of meat, which had lodged somewhere between her mouth and stomach, while she was at dinner on that day. She had eaten nothing more, but said nothing of her trouble at the time. There was a very uncomfortable sensation somewhere about her larynx—a feeling of choking—which had grown worse, until about seven hours after the accident she sent for me. During the afternoon, she had attempted to produce vomiting by tickling the fauces with a feather dipped in olive oil, but without effect.

I found her up, and having no dyspnœa nor other marks of any serious trouble, but complaining very much of a distressing sensation of choking, which she referred to the fauces. In several attempts to swallow water, nearly all was retained in her mouth; a little apparently went down. Nothing could be seen in the throat; nor felt by my finger, which I introduced, and with it carefully explored every part quite to the commencement of the œsophagus below the pharynx. I therefore introduced a sponge probang saturated with olive oil, the head being held far back so as to bring the mouth as nearly as possible in a direct line with the œsophagus. When the sponge was fairly in the œsophagus, steady pressure was continued upon it, but without making any advancement; and having exerted all the force that seemed to me proper, I withdrew it. Then placing my fingers and thumb over the œsophagus behind the upper part of the trachea, holding it between them so as not to compress the trachea, I began to *knead the œsophagus gently* with the ends of my fingers. In less than a minute the *morsel of meat rose into the patient's mouth*, with an instantaneous relief of the disagreeable sensations she had been suffering. It was a solid, unmasticated piece of meat, about an inch and a quarter in length, and more than half an inch in the other dimensions.

I was informed that a sister of my patient, about the same age, had suffered a similar trouble six years ago. The circumstance is worthy of mention, on account of its possible indication of a common predisposing cause. It might be said that the attempt to swallow large pieces of meat, unmasticated, would be sufficient cause for such a result as occurred to my patient; but this dangerous practice is so very common, and the lodgment of food in the œsophagus so rare, that where such a result occurs twice in one family, we are inclined to suspect an additional cause. The ladies are both quite old, and generally in good health. The morsel in the other case was dislodged and carried down by the probang.

CASE V. *Æsophagotomy for a fish impacted in the throat.* Lancet, 1854.

Singho Naide, a native of Colombo, aged 40, a fisherman by occupation, was taken into the Pettah Hospital on the evening of the 12th of August, 1853, a fish, which he held between his teeth while baiting a hook, having slipped back into, and remained impacted in, the œsophagus. On examining the neck, it appeared swollen, with a feeling as if there were fluid in the areolar tissue about the muscles of the neck. In the fauces the tail of the

fish was felt, and could be seen distinctly on depressing the tongue. The tail was inclined towards the left side of the throat, showing the direction the fish had taken in its course down the œsophagus. Careful examination externally failed in discovering the situation of the fish, and it was found impracticable to withdraw it from the throat for reasons which will appear obvious when the fish is described. . . . An incision was made between the anterior edge of the sterno-cleido-mastoid muscle and the trachea, commencing at the lower edge of the os hyoides, and extending down to the sternum. After a most diligent search, both by myself and my friends, nothing was discovered to indicate the spot where the gullet should be divided. The next step of the operation was conducted with great care. The passing of a male catheter was intrusted to Dr. Elliott, who, with no little difficulty, introduced it into the gullet, directed by his fingers, and turned the convex side of it towards the wound. This enabled the part to be seized with a pair of forceps, and a small opening to be made into the œsophagus. The finger introduced into this opening gave the feeling of something cartilaginous being lodged, which was soon found to be the edge of the fish. A polypus forceps was introduced, and attempts were made to extract it, but to no purpose, as the head of the fish was too smooth to be grasped by a polished instrument. A little manœuvre with the index finger, however, soon dislodged the fish, which made its exit through the wound headforemost. The fish was four inches and a half long from head to tail, and one inch and a half broad. It is named by Mr. Gray, in his "Illustrations of Indian Zoology," "*Anabas Spinosus*," and has long and sharp fins, both on the back and near the gills. About a week after the operation a little nourishment was given through the mouth, but as some of it flowed out through the wound, it was deemed prudent not to repeat the attempt, but to continue nutriment through the rectum. In three or four days more the man was able to take nourishment by the mouth, from which time he began to gain flesh and strength. The wound healed gradually, and he was discharged quite cured on the 23d of September, with merely a line of cicatrix on the side of the neck. The performance of the operation occupied more than an hour, and this, by lamplight.

CASE VI. *Suffocation from a glass stopper in the pharynx; removal and resuscitation.* By G. R. B. Horner, M. D., U. S. Navy. Med. Examiner, 1853.

Sunday, June 10th, 1853, in the morning, Mary Berry, a girl about seven years old, residing in the southeastern part of Philadelphia, put the top of a broken glass decanter-stopper into her mouth. The top was globular, and about two inches around. From some unknown cause she took a long inspiration, and, as she says, sucked it down her throat. It lodged at the entrance of the œsophagus, and so obstructed that or the glottis, that she immediately became strangled. Her mother and others about her in vain endeavored to relieve her; an apothecary was sent for, and could not do so. Luckily, Mr. Isaac Hugg, an ingenious, long and slender-fingered tailor, living opposite, in Second street, heard the alarm, ran to the poor child's relief, and understanding what had happened, thrust his fingers into her throat, but at first could not feel the stopper. He tried a second time: after raising her feet upwards, and placing her head downwards and over his knees, and after getting a finger under a projecting point of the broken surface of the stopper, he succeeded in throwing it upon the floor. By this time the child was insensible, but on the introduction of his fingers, gagged, assisted his efforts, and was resuscitated, though pronounced dead by the druggist, deceived perhaps by the lividness of her face, and other fatal signs. Of the above facts I was informed while passing her residence at the time of the accident, and by subsequent inquiry.

CASE VII. *Three large hooks stuck fast in the gullet.* Mr. Liston's Lectures, in the Lancet, 1844.

Occasionally you find very curious foreign bodies lodged in the throat. The following case came under my notice years ago, though the patient was not under my care. A boy, engaged in herding cattle, was preparing his fishing tackle. He had a hook for catching jack, which he put in his mouth in order to repair it in some way. The cattle, meanwhile, wandering amongst the corn, he shouted out on observing them, and in recovering his breath, filling his lungs again, the hook slipped back into the gullet, and there it stuck. You are aware that in fishing for jack, there are used three large hooks, tied back to back, like a grappling iron, by means of brass wire. There was much fuss made about this case; the boy was brought from a great distance to the Hospital, and he was kept as a show for some time. Every one suggested some plan or other for getting out the foreign body. It was a case in which, had it been in the hands of a very energetic surgeon, œsophagotomy ought to have been at once performed. There appeared but little chance of the three hooks coming out again, and the only apparent way of getting the boy out of the scrape would have been to make an opening below, and extricate them by pulling them downwards. The lad had a long chain hanging out of his mouth for weeks together, and at last it was proposed to use a bone probang, a large ivory ball with a hole in it; and this was to be pushed down to disentangle the barbs. By this time, however, extensive ulceration of the pharynx had taken place, and the foreign body was gulped up, to the relief both of the patient and of the medical men.

CASE VIII. *Ejection of a foreign body from the œsophagus by injecting tartar emetic solution into the veins.* Lancet, 1836, vol. xxx.

A case of expulsion of a foreign body from the œsophagus by injection of tartar emetic into the veins, is related in the above cited journal, by Dr. Aggens.

An hysterical woman, forty-four years of age, affected with a *diverticulus œsophagi*, while eating her dinner partook of some potatoes; a large morsel of one not sufficiently boiled, became engaged in the sac of the œsophagus. A physician who was sent for ordered an emetic of ipecacuanha, but without effect. Three hours later the author saw her nearly in a state of suffocation. The danger was extremely pressing; he therefore dissolved three grains of tartar emetic in an ounce of distilled water, and injected two drachms of the fluid into the right median vein. In about a minute some nausea came on, but no vomiting. The danger of suffocation seemed more and more imminent; he therefore threw a similar quantity into the external ulnar vein, which immediately produced the wished-for effect. In order to prevent the access of inflammation in the vessels stimulated by the emetic fluid, a strict antiphlogistic treatment was had recourse to; but after twenty-four hours, the whole arm, and especially the neighborhood of the elbow-joint, became swollen. Frictions with the ung. mercur. ciner., scarifications, etc. gave no benefit; on the third day gangrenous vesicles were formed, and the part about the joint was of a strange hardness. The gangrene which threatened was now combated with a decoction of bark and the aqu. oxy muriat. The symptoms abated gradually under this treatment, and the woman was completely recovered at the termination of five weeks.

CASE IX. *Extraction of a five-franc piece from the pharynx.* Lancet, 1830, vol. xviii.

On the 15th of May, M. Dupuytren extracted from the pharynx of a young

man a five-franc piece, which had been swallowed the day before, and had remained in the pharynx for twenty-four hours, in spite of various attempts to remove it. An emetic had produced frequent vomiting, but had not altered its position. It was lying almost in a transverse direction, at the lower portion of the pharynx, where it formed a slight prominence. A pair of curved forceps was introduced, but without any effect, except that of slightly turning the piece of money. Graefe's extractor (an elastic probe, terminating in a conical piece of silver half an inch in length and breadth, the basis of which is concave and turned upwards) was now, therefore, introduced, and the coin, without any difficulty, brought up into the mouth.

CASE X. *A five-franc piece extracted from the œsophagus.* Lancet, 1843, vol. xliv.

At the end of 1838, a farmer in France consulted a medical practitioner for the consequences of his folly in swallowing for a wager, a five-franc piece, a coin about the size of an English crown. The man in question had suffered for eight days from the presence of the coin in the œsophagus; he could swallow only milk, broth, and other liquids, and was on the high road to perish of hunger. Pale and half dead with fright, he now applied to M. Monin, who reports the case. That gentleman, on passing an India-rubber sound into the œsophagus, ascertained that the coin was impacted there at about the junction of the upper two-thirds with the lower third of the tube; and he suspected, from being unable to pass his instrument beyond it, and from other signs, that the body was placed horizontally, so as nearly, if not wholly, to block up the passage. The membrane of the œsophagus was so closely contracted around the coin, that the elastic sounds of caoutchouc, whalebone, etc., at first used, had not force enough to compel the offending body to assume a more favorable position. In these embarrassing circumstances M. Monin caused some forceps to be made, the limbs of which were curved so as to form the segment of a circle, and which opened *sideways* in the direction of the mouth, and *not vertically*—a point strongly insisted on by M. Monin. The inside of each limb, at its extremity, was roughened with a file. This instrument, well oiled, was introduced with ease into the œsophagus of the patient, the left forefinger of the operator being placed over the root of the tongue and epiglottis. With a small degree of force the instrument now obliged the coin to place itself in a vertical position, or with its rim upwards, and in a few moments it was seized by the forceps, and being firmly grasped, slow and gentle traction was employed. This was continued till the coin arrived in the pharynx, where, being arrested by the arch of the palate, it suddenly escaped from the hold of the operator. The pressure it now exercised over the glottis caused symptoms of imminent suffocation; but a sharp blow between the shoulders speedily caused the expulsion of the coin from the mouth.

The operator, who has a humorous way of reporting the case, says, "to make a bound, and dash after the object which had caused him so much terror and suffering, was the first impulse of the poor patient, who disappeared like a flash of lightning (*partit comme une éclair*), without paying the least attention to my recommendation of moderation in diet after his long starvation. I did not see him for several days afterwards, when he complained of nothing but a little soreness at the point where the piece of money had been impacted. He experienced no other ill effects from his imprudence.

CASE XI. *Fatal hemorrhage from a set of false teeth impacted in the œsophagus, and opening the aorta.* Mott's Velpeau's Surgery.

Dr. James Duncan, one of the surgeons of the Royal Infirmary of Edin-

burgh, relates, during the year 1844, in *Cormack's Monthly Journal of Medical Science*, the extraordinary case of a man aged 22, a journeyman dentist, who, having been in the imprudent practice of wearing, during sleep, two artificial superior anterior incisors, which he had adjusted in place for the two that had been lost, and which, for the sake of concealment, were badly secured by springs, accidentally found, on awaking one morning, that they were missing, which induced him to believe that he had swallowed them, of which he was unhappily convinced by the difficulty and pain he experienced in attempting to swallow. Mr. Syme, to whom he applied for assistance, detected, by means of a probang, a foreign body in the œsophagus, considerably below the cricoid cartilage, and much beyond the reach of the ordinary forceps used for extracting foreign bodies from the gullet. The swallowing having improved, it was thought the teeth had passed into the stomach; but the pain continued, and some small quantity of blood was spit up. About nine days after the accident he suddenly fainted and vomited a mouthful of blood. The attempt to introduce a forceps now brought on vomiting of blood in considerable quantities, viz., to eight or ten ounces, when the false teeth were brought up; but this was immediately followed by several mouthfuls of bright arterial blood, when the lips became pale, the pulse ceased, and the patient expired in convulsive sobs.

The gold plate and teeth were large, angular and sharp. The aorta, about the size of a crow-quill, was found open half an inch below the origin of the left subclavian artery, the œsophagus having been perforated four inches below the rima glottidis. The stomach, duodenum, and gullet, were distended with some eight or ten pounds of arterial blood.

CASE XII. *A door key arrested for weeks in the œsophagus where it joins the pharynx.* Note in Chopart's *Maladies des voies Urinaires*.

The poet Gilbert was received into the Hôtel Dieu, of Paris, in November, 1780, to be treated for insanity. Five weeks before entering the hospital, he swallowed the key of his chamber door, which measured five inches and four lines in length. He told those about him he had swallowed it, but as he spoke in his natural tone, respired freely, complained of no pain in the throat, and took his drinks and nourishment with but little difficulty, he was not believed. In submitting to treatment, he would frequently say, in laughing, he had in his throat a door key; but neither tumefaction or hardness could be detected in this region. His madness proved fatal, and to the surprise of those who had prescribed for him, the key was found at the junction of the œsophagus and pharynx.

CHAPTER V.

THE CHEST.

SECTION I.

OPERATIONS ON THE RIBS AND STERNUM.

CASE I. *Removal of portions of two ribs; recovery.*

This we find in the *Lancet* of 1828, vol. xiv., and though without authority, seems to be well authenticated. It occurred in a scrofulous patient, who,

when aged eighteen years, was exposed to inclement weather. The right side and foot became swollen, ulcerated, and the tarsal bones and ribs were found to be carious. April 3d, 1827, the tarsal bones were removed, and then subsequently, the ribs; which operation is thus described:—

Miss Gray's side now became an object of interesting attention; it remained *in statu quo*. Hectic fever, under which she had already labored when she first came under my care, was excited and increased by the hot weather; colliquative diarrhœa came on; the discharge from her side, always extremely fetid, grew more so; her strength declined daily.

From many careful examinations, I became satisfied that the caries of one or more of the ribs was to the extent of six or seven inches. From the anterior to the posterior opening, injected fluids readily passed; but not *vice versa*. The lungs were involved in the disease, as was evident from a troublesome and alarming cough, with purulent expectoration, with which she was and long had been harassed; and which caused me to remark to her that the removal of those ribs would afford a prospect of its relief. She caught at the prospect with avidity, and urged the operation, which she was much encouraged in by the concurrent opinions of other physicians who visited her.

Fearful of the result, her case being a very unfavorable one to success, I for some time parried her solicitations. I very much doubted whether the existing disease in the lungs might not be too extensive to admit of cure even after the caries, which I considered the proximate cause, was removed. Finally, however, I consented to operate.

Never having seen a detailed mode of operating for the removal of a rib, I made my first essay upon a dog, and found the operation less difficult than I had anticipated.

On the 25th of June, 1827, with the advice and assistance of Drs. Caruthers, Shanks, and Jordan, the operation was performed.

An incision was made upon the seventh rib, from the posterior to the anterior sinus, bringing to view about six inches of its convex surface, discovering it to be in a state of complete necrosis. No formation of callus anywhere discoverable; after examination, the incision was carried forward about an inch and a half further, where the rib appeared sound, bleeding when scraped. Having completely divested it of its periosteum, I here passed an *elevator* under the rib and between it and its periosteum, and divided it with Hey's saw. The incision was then extended back to the spine, and the rib was there detached from its articulation with the vertebræ. At this part of the operation much care was used to avoid wounding the dorsal nerves.

On further examination, the sixth rib was found in like manner diseased, and was in like manner removed. Underneath this rib, a little anterior to the angle, a sinus communicating with the lungs was discovered: a hole about the size of a goose-quill, which emitted a great quantity of matter, discharging with more freedom when she coughed.

From *reviews* I have seen of operations to remove carious ribs, as performed by Cettadini and Richerand, securing the intercostal arteries seems to have constituted a difficulty.

In this operation I was not under the necessity of applying a ligature to any bloodvessel, the intercostals lying between the pleura and the periosteum were made perfectly secure by interposing the *elevator*, as above stated, between the periosteum and the rib.

After removing as much of the diseased soft parts as was deemed prudent, the wound was closed with the interrupted suture and adhesive strips, covered with lint, and secured with a roller. Inordinate inflammation was completely prevented by two small bleedings, and maintaining a loose state of the bowels.

Examination on the fourth day discovered about four-fifths of the wound to have healed by the first intention. No pain has been complained of since that time; the hectic declined, and disappeared in a few days; the cough has materially subsided, sometimes not troubling her for twenty-four hours together. An issue is maintained by tents, opposite the sinus of the lungs, through which a considerable quantity of matter, which appears to be a mixture of mucus and pus, discharges; this opening will be maintained until the lungs are entirely relieved.

On the 15th August, she left town on a visit to Digu's Sulphur Spring, a trip of twenty-two miles, which she made in a rough Jersey wagon, without complaining of fatigue. I visited her on the 22d; her cough had mended, her appetite and strength had increased, and her general health and appearance had visibly improved. She rides daily to the spring on horseback, a distance of more than half a mile from her lodgings.

The portions of ribs removed had suffered internal necrosis. Their lamellated structure was, to a small extent, destroyed at several points; viz., at the anterior sinus, at the angle, and at the neck; but most at the angle.

CASE II. *A rib fractured during a paroxysm of coughing.*

This was published by the late Prof. Graves, in the *Dublin Journal of Medical and Chemical Sciences*. It happened to a lady, aged 47, and of unusual muscular development for her sex. During a violent fit of coughing, she felt a stitch in her left side, accompanied with a sensation of something having snapped or given way. The diagnosis of a fractured rib, the ninth or tenth, was clearly made out, and the patient relieved by a compress and roller over the part affected.

CASE III. *Exsection of the first piece of the sternum; death from subsequent hemorrhage.* Lancet, 1850, vol. i.

It would appear that the disarticulation of the first piece of the sternum from the clavicles has never been tried. M. Pecchioli, an Italian surgeon, has lately attempted this operation; and, though the patient died, we shall give the various steps as reported by the *Gazette Médicale de Paris*. The man was twenty-three years of age, and suffered from scrofulous caries of the bone. The operation was performed as follows: A vertical incision was made along the median line with a curved bistoury, and two horizontal ones, each meeting by its centre one of the extremities of the first incision. The two square flaps thus formed were dissected and turned laterally, by which means the carious bone was laid bare; the operator then cut the lower portion of the latter, by means of a little saw; he then used a curved bistoury, with a narrow blade, and directing it from within outwards, divided the second and third sterno-costal cartilages, and cut the first rib partly with the scalpel and partly with the osteotome. The only disarticulation was that of the right clavicle, as the left had been long luxated by the destruction of the ligaments, which were bathed in purulent matter. When the upper piece of the sternum was detached from its cartilaginous and osseous connections, M. Pecchioli introduced an elevator under the middle of its inferior extremity. He thus raised the diseased segment, and terminated its extraction by dividing from below upwards, with a common bistoury, the attachments of the sterno-mastoid, sterno-hyoidean, and sterno-thyroidean muscles. The only vessel of importance divided, was the right internal mammary artery. At the place of the removed sternum, the periosteum which had been carefully spared, was seen. It was much thickened, and covered inferiorly and on the right side by a purulent collection, which was evacuated. Through this

opening the respiratory movements, and those of the heart and great vessels, could be perceived, under the pleura. The excised bone presented signs of caries on some points, and necrosis upon others. The fifth day after the operation the patient died from hemorrhage, which had occurred three times before, but had been controlled. On a post-mortem examination, an abscess was found between the costal and pulmonary pleura, corresponding to the anterior aspect of the superior lobe of the right lung, containing about five ounces of pus; it was closed on all sides by folds of the pleura. It seems strange that no search was made for the vessel which furnished the blood; at least, nothing is said about the matter in the report.

CASE IV. *Exsection of the inferior two-thirds of the sternum and the extremities of the two corresponding ribs; cure.* By Dr. Mercier, of New Orleans, Louisiana.

This operation was performed in 1843 in the Charity Hospital of that city, probably the largest institution of the kind in America. After removing the inferior extremity of the sternum and corresponding portions of two ribs, the point of the heart in the pericardium could be touched with the finger, and its impulses could be counted by the eye. The patient perfectly recovered; was alive in 1851, at which time his surgeon lost sight of him.

CASE V. *Resection of the xiphoid cartilage for an affection of the stomach; cure.* New Orleans Med. and Surg. Journal, 1853.

In February of 1851, Dr. Linoli was requested to see a young man 22 years of age, who had suffered for a long time with obstinate cardialgia. He had lost much flesh and strength, and seemed to be rapidly declining from what was supposed to be scirrhus of the pylorus. The patient was attacked with pain and vomiting soon after eating, if he attempted to ascend a hill or a flight of steps; whereas, if he reclined, he remained free from pain. M. Linoli noted that the point of the epigastrium upon which the slightest pressure produced intense pain, exactly covered the point of the xiphoid cartilage. At the same time, he discovered that the xiphoid cartilage terminating in an obtuse angle, pressed upon the stomach. Pressure upon this point produced intense pain and violent vomiting.

M. Linoli states that he had enjoyed the rare fortune of examining in the cadaver, three cases of this species of deformity, all of which had suffered during life with symptoms very like those which afflicted the young man in question. The recollection of these three cases, and the absence of phenomena indicating organic lesion of the stomach, led M. Linoli to believe that the cardialgia, in this case, proceeded from an introflexion of the xiphoid cartilage. He, therefore, determined to resect this portion of the sternum, and the patient consenting, he performed it on the 4th February, 1851.

By an incision, M. Linoli exposed the retracted portion of the xiphoid cartilage; he opened the peritoneum, penetrated the cavity of the abdomen, and having introduced his finger, he felt at the extremity of the sternum, a sort of crotchet, against which the stomach pressed when filled with food. With a blunt-pointed bistoury, he divided the appendix at the point where it retracted. Two arteries required the ligature, and with two ligatures the wound was closed.

No serious accident followed the operation. He had slight fever and some meteorism, which were overcome by a small bleeding. On the fourth day, the dressings were removed, and on the eighteenth day the wound was entirely healed. The cardialgia and other stomach symptoms entirely disappeared, and eight months afterwards, this young man enjoyed perfect health.

SECTION II.

PARACENTESIS THORACIS, OR TAPPING THE CHEST.

Within the past few years paracentesis thoracis has been revived, and the operation recommended in the treatment of pleurisy. Professor Trousseau, of Paris, and Dr. Bowditch, of Boston, have been the recent active advocates for it. The latter gentleman, in 1854, reported the results of forty-seven cases of these operations in twenty-five patients, in the *American Medical Monthly*. He considers tapping the chest the first remedy for pleuritic effusion of any duration, in which the amount of fluid is large, or in which any serious symptom exists. He operates with an exploring trocar and suction pump.

The following is Dr. Hitchcock's interesting case.

CASE I. *Paracentesis thoracis, a case in which thirty-seven pounds and seven ounces of fluid were drawn off in four operations.* By Alfred Hitchcock, M. D., of Fitchburg, Massachusetts.

John G. Henry, married, aged 23, carpenter, of Lunenburg, Mass., always of slender appearance, thin and tall. Has been subject to winter coughs for several years past, and has labored irregularly for the last year, having had, during this period, two or three slight attacks of hæmoptysis. In the month of September, 1852, he had an attack of pleurisy, involving the lower portion of the left chest. Pain, with slight fever, continued for nearly a week, but passed away under treatment of his family physician, Dr. Stickney, of Townsend.

About the 1st of November, 1852, the left side was found larger than the right. There was complete dulness on percussion, and absence of all respiration except at a small space in front, about three inches in extent, in the sterno-clavicular angle. On the 21st of Dec., 1852, I first saw the patient in consultation with Dr. Stickney. At this time his appetite was good and bowels regular. He had dry cough and occasional night-sweats. The left chest exhibited the signs just named, attended with extreme dyspnœa on walking, and a leaden cadaveric countenance. The size of the left side was $1\frac{7}{8}$ inch greater at the level of the nipple than the right side, and 1 inch larger at the ninth costal interspace. Right lung healthy. Heart displaced to the right of its normal position; somewhat irregular in its action; pulse 120 to 140.

On the 27th of Dec., 1852, with the assistance of the attending physician, I performed the operation of paracentesis thoracis—opening between the eighth and ninth ribs, $6\frac{1}{2}$ inches from the spine. Eighty-five ounces by weight (avoirdupois) of straw-colored serum were immediately discharged through the canula; and, by estimation, fifteen ounces more discharged upon cloths during the next succeeding twenty-four hours—when the orifice healed, and no more fluid escaped. He was greatly relieved by the operation; his breathing was much freer, his pulse fuller and more steady, and he immediately walked up and down stairs without difficulty.

April 6, 1853. Visited Mr. Henry with Dr. Stickney. He reports having been greatly relieved by the operation of Dec. 27th. He continued very comfortable for two months; since then, the left side has increased in size, and now presents the same physical signs and measurements as at that time. The dyspnœa, however, is less urgent. At this time I opened between the ninth and tenth ribs, about 5 inches from the spine. One hundred and sixty-four ounces of serum were at once discharged; and after withdrawing the

canula there was no further escape of fluid. The patient was greatly relieved, and very evidently had more strength and a less sickly appearance than at the first operation.

June 6. His attending physician now reports him as having been very comfortable since last operation; is entirely free from cough; appetite and digestion good, and has gained some flesh and strength. Within a few days the dyspnœa has returned, and to-day the left chest is again full of fluid: the measurements being precisely the same as before. This time I opened between the ninth and tenth ribs, and drew off one hundred and sixty-two ounces.

August 20. Since last date he has been very comfortable, walking about and occasionally doing some light mechanical work for amusement. Recently the dyspnœa has returned, and to-day the left chest is full of fluid, and measures half an inch more than at former operations. I opened between the ninth and tenth ribs, and drew off one hundred and seventy-three ounces of straw-colored, slightly turbid serum. Patient has more flesh and strength than in December last; is lively and cheerful, and seems determined not to succumb to his disease.

Nov. 24. Mr. Henry called at my office "for exhibition," and says he has been quite well since last operation; has gained 7 lbs. in weight; is entirely free from cough; can walk several miles in a day without dyspnœa, and has recently worked half a day at a time at his trade. On a slight examination I found the front of the left chest partially resonant from the clavicle down to the cartilage of the sixth rib. At this time I learned that for a year past he had made daily use of small and increasing doses of morphine; and for two months past the quantity has been increased, until at the present time he uses seven or eight grains daily. This practice is entirely his own, and not in accordance with professional advice. In the same manner he also uses gin in moderate quantities—an article with which he had considerable acquaintance before his sickness.

Of the medical treatment for a year past, I learn that alteratives, diuretics and counter-irritants have been faithfully tried, but without ever diminishing the fluid in the chest. He has taken several bottles of cod-liver oil, and occasionally some tonics.

The fluid withdrawn at these several operations was albuminous; becoming a white opaque solid on boiling, and leaving no fluid. The method of operating in this case was by dividing the skin with a scalpel parallel with the rib, one inch in length and one and a half below the point of puncture through the parietes. The skin being drawn up, a fine canula probe is thrust in and the style withdrawn; a drop of serum escaping indicates that the chest is reached, and then a common trocar is carried in, following the exploring canula as a director. The small canula and trocar are then withdrawn, leaving the large canula for the escape of the fluid. With one hand the canula is held, and with a finger of the other acting as a valve at the orifice of the canula, the escape of the fluid is graduated and the ingress of air prevented.

Jan. 9, 1854. I have just seen Mr. Henry, and he informs me that he has worked at his trade for several weeks past at a shop in this village; working about five hours each day. Says he feels quite well; has gained 12 pounds of flesh since last operation. He now takes four to five grains of morphine daily, drinks three or four glasses of gin, and smokes "very often."

I examined Henry, and found the left chest perfectly dull below the level of the sternal end of the fifth rib; above this line it was partially dull, with bronchial respiration. The right lung I found slightly dull at apex, with

sibilant râles extending three or four inches below the clavicle. He has no cough, no fever or night-sweats.

Notwithstanding this apparent improvement in his condition, it is pretty evident that he has tubercular disease, which will not very long be retarded by medical or surgical interference.

SECTION III.

PENETRATING WOUNDS OF THE CHEST.

CASE I. *A large ball traversing the chest; the case of Gen. Shields.* By Paul F. Eve, M.D. Southern Med. and Surg. Journal, 1848, vol. iv., N. S.

This gallant soldier has recently been the guest of our city, and we were called upon to dress his second wound: being detained, we found our friend, Dr. Dugas, in attendance when we arrived. It is known that Gen. Shields was wounded twice in the recent battles in Mexico. By the discharge of a cannon at Cerro Gordo, he was shot through the body and given over as certain to die. The General thinks it was a grape-shot that traversed his chest. The ball has evidently passed *between the lungs, through the mediastina*; entering within the right nipple and passing out near the spine on the right side. He spat no blood, did not fall, and even gave the word of command after being wounded. In a few moments he was in indescribable agony, and prayed, even for death, to be relieved!

None but a medical man can fully appreciate the nature of this wound, which has no parallel on record.

CASE II. *A grape-shot through the chest; patient lived sixteen months afterwards.* By A. M. Blanton, M.D., of Frankfort, Kentucky. American Journal Med. Sciences, 1849, vol. xvii.

Ed. Cahill, æt. about 40, a large muscular man of 180 pounds weight, private in Capt. Turpin's Company, 2d Regt. Kentucky Infantry, was wounded on the 23d Feb. 1847, at the battle of Buena Vista, in the left breast, under the middle point of the clavicle, by a large shot—his companions say grape-shot, as they were too far distant for musketry to take effect, and as they noticed the discharge of a Mexican cannon simultaneously with his falling.

The ball entered between the second and third ribs, cutting the inferior edge of the former and the superior of the latter, passed through the lungs, again through the ribs, ranging horizontally, and lodged, there is every reason to believe, under the scapula.

He was borne off the field in a collapsed condition, blood and air rushing copiously from the dreadful wound, and was placed against a wall in an upright position, it being discovered that he was threatened with suffocation when his body was at all inclined horizontally.

He was carried to Saltillo the same night, and placed in the cathedral, used as a temporary hospital, where I found him on the 26th in the position above named; breathing short and difficult; unable to pronounce three words without pausing; having a constant troublesome cough with bloody expectoration; not much pain about the wound, which discharges in twenty-four hours from a pint to a quart of blood and bloody serum; air also was rushing through the orifice at each act of respiration. His skin was cool and moist; pulse 100 and weak; countenance blanched and anxious. When he was struck his left arm was elevated so that the relative position of the great pectoral muscle with the hole between the ribs was altered when the arm was permitted to

fall, and the opening into the chest was valvular. By raising the arm to a level with the clavicle, the wounds in the muscle and between the ribs were made to correspond, and presented an opening into the chest one inch in diameter. I attempted to probe the wound, but every time the instrument was inserted he would faint and compel me to desist; pieces of torn lung were forced through the opening by the efforts of coughing and by the discharges of blood.

He had been kept as quiet as possible since the injury was received, had eaten scarcely anything, and taken no medicine save a laxative and opiate.

A large piece of lint was kept over the wound, and below were placed large cloths to receive the discharges. He was put on a mattress; one half of which was placed upright against a wall; a half cup of tea and a small piece of stale bread were allowed three times a day, and he was kept nauseated six hours in twenty-four by powders of ipecac. and calomel; and each night took $\frac{1}{2}$ gr. of morphia to enable him to sleep.

March 1. Has been doing very well; inclination to fever has been checked by extreme abstinence and nauseants. But little pure blood expectorated or thrown out of the wound, which is almost free of its slough and disposed to suppurate.

4th. Can hear the air escaping through the wound at ten paces, when he coughs; discharge is sero-purulent and of offensive odor, amounting to at least a pint in twenty-four hours. Has pleurisy, which is disappearing under the use of almost complete starvation, nauseants, mercury and opiates; the last named always necessary to procure sleep. He also takes every other day a dose of castor oil. Pulse is 100 and weak; surface pale and cool. The wound externally is clean; attempted to examine it with a probe, but he fainted as before, not from pain, but from a peculiar tickling sensation, as he expressed it.

I had the arm elevated, and picked away several spiculæ of bone from the ribs, and then exposing the chest to a very strong light, *saw entirely through the cavity, a rib posteriorly, white and denuded.* He complains of a dull, heavy and constant pain under the scapula and about the shoulder.

25th. Nothing of much interest has occurred; has had pleurisy several times, which was relieved directly by the before mentioned remedies, and as many times after a little exertion has coughed up several mouthfuls of blood. The wound has contracted to the size of a dime; discharges about $\frac{3}{4}$ j. daily and permits the escape of air, with a whistling sound. He can sleep with his body depressed to an angle of thirty degrees.

April 10. Discharge nearly ceased; wound round, and a quarter of an inch in diameter; air escapes when he coughs; still restricted to a very spare diet; for two weeks has taken no medicine, except several laxatives and opiates; walks several hundred yards during the day.

May 1. Has been allowed for ten days a liberal diet; wound closed; a very little air escaped several days since. Still complained of pain in the shoulder and weakness of the corresponding arm; has fattened; can lie down; appetite and digestion good; goes through the city, walking several miles a day; when he takes severe exercise, has some difficulty of breathing. Discharged from the hospital.

In June, Cahill came to the United States, a hearty, robust looking man, of one hundred and eighty pounds weight, and I had not heard any particulars about him since, until in July, when I was told that he had died, and that an examination had been made of his body. Feeling a great interest in

his case, a friend was requested to furnish me a description of the appearances his body presented, and in a few days sent the following letter :—

WINCHESTER, Ky., Aug. 16, 1848.

“DEAR SIR: I am sorry that I am not able to give you a more minute history of Cahill's case.

“I saw him only once during his last illness, and only a few times since his return from Mexico.

“When he first came home he was as healthy and robust a looking man as I ever saw; he weighed at that time (June, 1847), I have no doubt, two hundred pounds; but Dr. Duncan, his physician, told me that he had frequent attacks of hæmoptysis; and that he started frequently out of his sleep, saying that he felt as if he was suffocating.

“He was taken sick about three weeks before his death, with every symptom of inflammation of the stomach he had a feeling of weakness, as he expressed it, in his breast.

“He has been living since his return at a tavern in the capacity of a bartender, and I have been told that he was quite intemperate.

“On opening the chest it was discovered that the left lung was completely atrophied, not being larger than your hand, and of a dark livid color, and there were dense organized bands crossing the cavity in various directions, which had to be cut before the ball could be found.

“When discovered it was between the spinal column and end of the fifth rib, which was detached from the back-bone and fractured an inch from its extremity; the fractured portion was forced out of its place so as to form a resting-place between the adjoining ribs and spine for the ball. The ball was made of a metal resembling the metal of which bells are made, and weighed four ounces and five grs.; there was with the ball a brass button, weighing nearly two drachms, both of which were almost covered with a thick membrane, and also within the same sac there was a considerable quantity of exfoliated bone; those portions of the back-bone and ribs which were near the ball were entirely denuded.

“The pericardium was entirely agglutinated to the heart, the right side of which was somewhat atrophied. The right lung had morbid attachments between the pleura pulmonalis and costalis, and also to the diaphragm; it was of a lighter color and softer than natural.

“A. M. BLANTON, M. D.,
Frankfort, Ky. }

Very respectfully,
A. S. ALLEN, M.D.”

CASE III. *A ball lodged for fifty years in the lung.* By Edward Moore, M. D., F. L. S., Plymouth. *Lancet*, 1847, vol. i.

The subject of this communication, Mr. John Lennon, was celebrated, during the last war, for his bravery and energy during many eventful periods of its continuance. Originally a midshipman in the Royal navy, he quitted the service in 1796, and took the command, at Martinique, of an armed schooner, “The Favorite,” letter of marque, of six guns and twenty men. On his first cruise, in December of that year, he fell in with three privateers, two Spanish and one French, the latter having eight guns and sixty-five men, when, after an engagement of one hour and a quarter, he was wounded in the back by a musket-shot, which entered at about the right fifth rib, midway between the spine and scapula. He fell, and his crew made no further resistance to so superior a force. He was taken into Carthage, whence he was conveyed in the Spanish frigate “Helena” to the hospital at the Havannah, and after four months he was exchanged by cartel to Bermuda. Mr. Lennon detailed, that

on receiving the shot, he fell, and presently became faint, and experienced a sensation of suffocation, accompanied with bloody expectoration. The French captain examined the wound, and finding blood issuing from it in large quantities, he stuffed some cloth into it, and bound a sash round the chest. This gave instant relief, particularly to the faintness and difficulty of breathing—probably by restraining hemorrhage from the intercostal artery. He further related, that on arriving at the Havannah, he was tormented with a sensation as if the ball was lodged in the diaphragm, about the anterior end of the osseous portion of the seventh rib, on the right side. The Spanish surgeons were desirous of making an opening at this part, with a view to extract the ball; but to this he objected. They told him, however, that as his life depended on it, they insisted on its performance, and preparations were made to enforce this determination; but an energetic appeal to the priest was successful in obtaining an exemption from this proceeding, which will afterwards be seen to have been a fortunate circumstance. The external wound having at length got well, he proceeded, in March, 1798, to Kingston, in Jamaica, where he was invited to a public dinner by the St. Patrick's Society, on the 17th of that month. On this occasion, the conviviality of the meeting induced him to forego that cautious manner of living which he had hitherto adopted, and the first glass of wine brought on a violent cough, during which he felt something had been coughed up, on getting hold of which he slipped it into a letter, and placed it in his pocket. On afterwards examining this, it proved to be a portion of his shirt and of a nankeen jacket, which he had worn in the action fifteen months before. Each piece was about an inch and three-quarters round, with ragged edges.

After this period he continued in command of various armed vessels in the merchant service. In one voyage his ship was upset in a white squall, and himself and five men were exposed for seven days at sea in a small boat. On two occasions he was captured by the enemy; he also twice beat off American privateers of superior force, for which he received numerous valuable presents from his owners, and from the merchants of St. Thomas's; he was also thanked by the merchants at Lloyd's. I mention these circumstances in order to show the active nature of his life; but his exploits will be found more fully detailed in the 14th, 15th, and 16th numbers of the *Colonial Magazine* for 1841; and especial mention is made of one of them, where his gallantry was very conspicuous, in *Brenton's Naval History*, vol. v. p. 179.

After leaving the sea he went to London, and being still affected with uneasy feelings from the apparent lodgement of the ball at the lower part of the chest, he consulted Mr. Gaitskell, with a view to having it removed. This gentleman took him to most of the principal surgeons in town, and, among others, to Sir Astley Cooper, who, after a careful examination, advised him not to risk the danger of an operation.

Since 1829, Mr. L—— has resided in Plymouth, during which time the writer of this notice has been his medical attendant. He has not suffered from want of general health, but has been liable to frequent attacks of bronchitis, which induced an habitual cough, and he was observed to have contracted an increasing disposition to bend the head forwards and towards the left side: this was contrary to the usual result of contraction arising from shrinking of the lung, where the stooping position is generally towards the side affected.

Latterly he has had one or two attacks of gout. On one occasion he missed a step on coming down stairs, which, in his opinion, displaced the ball, as hæmoptysis resulted for a few days. The sensation of this displacement was felt at the usual place, the end of the seventh rib, and he always thought that

by placing himself in a particular attitude, and making pressure on the part, he had succeeded in restoring it to its original position; this, however, on examination post-mortem, turned out to be erroneous.

During April, 1845, he had a severe pleuritic attack, and the bronchitis became of a chronic character, and he was scarcely ever free from cough and expectoration. In July, 1846, after severe mental excitement, owing to a false accusation, operating on a highly sensitive mind, he came home on the 22d, complaining of chilliness; and having used a pediluvium and gone to bed, he was found during the night to have been attacked with paralysis of the left hand and arm, which by the 25th had extended to the entire left side of the body. He complained of pain in the right temple, aggravated by his cough; his speech was also thick, and almost inarticulate. Abstraction of blood, purging, &c., rendered him more sensible, and better able to make himself understood. From this time he became more tranquil, but never regained sensation on the left side; the cough also continued to harass him; the dyspnoea gradually increased; expectoration became more difficult; the sputa extremely tenacious, so as to need removal mechanically from the fauces; the mucus was succeeded by gurgling râles; and at length the powers of life gradually sank on the night of the 27th August, 1846.

Post-mortem examination.—On examining the chest, the left lung was found adherent to a great part of the costal pleura; a serous effusion occupied the lower part of the remaining cavity; the air-cells were distended with sero-mucous fluid, and the lung altogether appeared to occupy an enlarged space, the mediastinum bulging into the right cavity of the chest. The heart was natural in size, but loaded with fat. The right lung was contracted to one-third of its natural size, and adherent to the upper part of the chest; its consistence was flaccid, and entirely wanting the resilience and mottled appearance of a healthy lung; indeed, although portions of it floated in water, it may be questioned whether during life it was of much use as a respiratory organ; any trace of the track of the ball seemed to have been obliterated in it, unlike the case related by Sir E. Home, where, after a lapse of thirty-two years, an induration could be traced. The shot, which had entered between the fourth and fifth ribs, fracturing the former, was found imbedded in the substance of the lung, and firmly attached by a pedicle half an inch long, condensed lung, and cellular membrane, to the inner surface of the third rib, just at the junction of the osseous and cartilaginous portions; although the fingers could be passed under it, it could only be separated by the knife. A doubt was expressed by a gentleman present, whether the ball had not been situated exterior to the lungs; but on removing the lung itself out of the body, before exposing the ball, it was satisfactorily shown by dissection, to my medical friends, Dr. Soltan, Mr. Square, and Mr. Eccles, that it was completely surrounded by the substance of the lung, being contained in a sac so closely in contact with it, that it was difficult to remove the ball when half exposed by incision. There was no serous effusion in this cavity of the chest, the lower two-thirds of which were occupied by the diaphragm, which rose as high as the fifth rib (in the inclined position of the body), pressed upwards to such an extent that on making an incision from above into the convex part of the diaphragm, the knife, instead of exposing the posterior edge of the liver, disclosed the large intestines; thus we were enabled to account for the inclination of the head towards the left side of the body, instead of the right, as in ordinary cases.

Reflecting on the sensation produced during life, of the ball being situated low down in the chest, search was now made for any other foreign body that might, by possibility, have lodged there; but every part of this locality was

found of a healthy character—consequently an operation on this part, with a view to extract the ball, would have been utterly fruitless, and probably attended with a fatal result.

CASE IV. *A ball traversing the chest.* Mr. Guthrie's Lectures—Lancet, 1853.

Case of Colonel Broke by himself.—Towards the close of the battle of Orthez, on the 27th of Feb., 1814, a musket-shot struck me between the second and third ribs on the right side, near the breast-bone. I was then on horseback, being aide-de-camp to Lieutenant-General Sir Henry Clinton, commanding the sixth division. The sensation was precisely as if I had been struck a violent blow with the point of a cane, but it did not unhorse me. I was attended in a very short time by the surgeon of the 61st regiment, when, on removing my clothes, the air and blood bubbled out from the wound as I drew my breath. The surgeon, turning me on my face, discovered the ball to be lodged under the thin part of the blade-bone. This he cut through and extracted the ball, and with it pieces of my coat, waistcoat, and shirt, which were lodged between the ribs and the blade-bone. This occurred about four P. M. I was then removed to the town of Orthez, a distance of about three miles, and in the course of the afternoon, the veins of both arms were opened in at least seven different places, but scarcely any blood came away; breathing became, in a day or two, exceedingly painful, and I felt nearly suffocated, when, in the evening, my brother, Sir Charles Broke Vere, arrived with my friend, Mr. Guthrie, who examined me carefully. The agony of drawing breath was such that I could scarcely endure it. He opened one of the temporal arteries, and desired that it might be allowed to bleed without interruption. He afterwards left me, to visit some other wounded men, and returned in about three hours, when I told him that I felt relieved, and had much less of the suffocating pain in breathing. He then opened the other temporal artery, directing as before, that its bleeding should not be checked. I shortly after that dropped asleep, and, on waking, could breathe freely; and my recovery was, from that time, progressive, the wound in front, where the ball entered, being the first closed; but both were healed at the end of about eight weeks, and in about ten I was able to rejoin the army at Bordeaux.

H. G. BROKE, *Colonel.*

He is now, in 1853, in perfect health; respiratory murmur free all over the chest.

CASE V. *A ball traversing the chest and leaving foreign substances in the lungs.* Mr. Guthrie's Lectures, in the Lancet, 1853.

An officer was wounded by a musket-ball, on the 9th of July, 1745, which passed through the chest, entering in front, fracturing the seventh rib near its junction with the cartilage attaching it to the sternum, and passing out behind, near the angle of the same rib, which it again broke, together with the one immediately below it. M. Guerin enlarged the openings of entrance and of exit to the extent of nearly two inches, by dividing the pleura, the intercostal muscles, and the integuments, from within outwards. Several splinters of the rib which injured the lung were removed, of which the smallest might be half an inch or six lines long, by two wide. A tent was then passed through the wound. The patient suffered much; spit a great deal of blood; pulse feeble; extremities cold. He was bled three times the first night, and twenty-six times during the first fifteen days, the seton being retained in the chest the whole time. On the twenty-second day a piece of cloth was felt by the finger, after removing the seton, and was extracted; a splinter

was also felt, but so deeply that it could not be removed without enlarging the incision. As the inflammatory symptoms were re-excited, he was bled for the twenty-ninth time. On the thirtieth day, these symptoms had so much increased that the seton was withdrawn, under the impression that it was doing more harm than good, and the thirty-first bleeding was effected. The next morning the patient complained of something pricking him within, and the parts left between the two original wounds, after the incisions which had already been made, were divided. The chest was now open from the articulation of the head of the rib with the sixth and seventh vertebræ behind, nearly to the cartilage in front; and the whole course of the ball was seen, which had made a groove in the surface of the lung, in the substance of which a splinter was sticking. This was extracted, and the wound dressed simply, after which the patient gradually improved, and was quite cured in four months.

The two first incisions for the removal of the splinters were necessary. The tent or seton drawn through the chest was an error; and although the fortunate result of the case depended probably on the removal of the splinters of bone sticking in the lung, few would survive the formidable operation performed for their removal. The case is suggestive and instructive.

CASE VI. *Transfixion of the chest by a scythe blade; recovery.* By F. Q. Sewell, M. D. British American—American Journal Med. Sciences, 1849, vol. xvii.

The subject of this extraordinary case was a youth 18 years of age, who had been mowing, and had taken the scythe off the handle, and was carrying it home to have it sharpened. Whilst walking, he happened to step on a log, when his foot slipped, and he fell on the scythe blade, the point of which entered under the right axilla, between the third and fourth ribs, passed horizontally through the chest, and came out through the corresponding ribs on the opposite side, making a small opening. The wound on the right side was about from two and a half to three inches long, that on the left, about one inch. The poor lad lay still, until his brother, who was with him, with admirable presence of mind, drew the scythe slowly out, observing with much caution as he did so, the curvature of the blade. The effusion of blood was not excessive, and the patient walked home with his brother's assistance. There was, it is said, no spitting of blood. The patient entirely recovered.

CASE VII. *The chest transfixied by a gig-shaft.* From Dr. Pliny Earle's account of the Hunterian Museum in the American Journal Med. Sciences, 1841, vol. ii., N. S.

Thomas Tipple, arriving at the house of John Overton, at Stratford, near London, on the evening of the 13th June, 1812, and the groom being absent, took off his coat and began to unharness the horse. Being undoubtedly not very well versed in the trade of an ostler, he commenced by taking off the bridle. This being removed, the horse sprang forwards, and the end of one of the shafts of the gig struck Tipple upon the left breast, pierced the parietes, traversed a portion of the thorax, came out upon the right side, and penetrated the sheathing of the house. The first persons who arrived upon the spot, after the accident, were Edward and Henry Lawrence. They testify that they found him standing upon tiptoe, with both his arms extended.

Although thus completely impaled, he was able to put his hand upon the end of the shaft and assist in drawing himself off. Being released he respired two or three times without difficulty, and there was no inordinate agitation of the body. The wound did not bleed very freely, and the patient

went into the house, took off his vest and walked up two flights of stairs. He was undressed, when there was a tendency to syncope, and "the trickling of blood upon the lungs" caused a difficulty of respiration. He sat in his bed until, upon being bled, that difficulty was relieved. The venesection was prescribed by William Maiden, a surgeon, who was called upon about nine o'clock. He found a hemorrhage from the wound on the left side of the thorax, made by the iron on the under side of the shaft of the gig. Air was also issuing from the wound, indicating a severe lesion of the vesicles of the lungs. The quantity of blood taken from the vein was about four pounds avoirdupois. The patient was permitted to drink a little cold water. At eleven o'clock, Sir William Blizzard arrived, and upon an examination of the patient, found the wounds to be each about four inches in length, while the left shoulder and chest were slightly emphysematous. Anticipating a reaction of the circulation, which he presumed would be hastened by the venesection, and which might occasion a profuse hemorrhage from the wounds, he prognosticated a fatal termination before morning.

This man by careful management finally recovered under Sir William Blizzard.

Tipple was thirty-four years of age when he received this remarkable wound. His digestion, at the time, was impaired, but it was much improved after his recovery. His general physical strength was less after the accident, and there remained a soreness of the chest, and a liability to difficult respiration upon making any inordinate exertion. During the first five years immediately following his recovery, it required less exercise than formerly to put him "out of breath." His health, however, became impaired by gout and rheumatism, and near the termination of this period J. W. Parkinson was called to him. He found him suffering from dyspnœa; his countenance expressed anxiety; pulse irregular; heart struggling. A copious venesection produced relief. On the next morning there was a recurrence of the same symptoms, which were again met by depletion from the circulation. The patient improved immediately, and soon attended to his customary occupation. At subsequent periods, however, he had other attacks, which were generally induced by bodily or mental exertion, irregularity of diet, or exposure. He was treated by bleeding, purgatives, digitalis, blisters, low diet and rest. These attacks became more frequent during the last two years of his life. In one of them mercury was employed until it produced a slight ptialism, and this remedial agent, with digitalis and bleeding, was the only curative means resorted to in several of the last attacks.

About six weeks before his death, having been exposed to the night air, he was attacked with inflammation of the mucous membrane of the lungs, accompanied by dyspnœa, uneasiness of the upper portion of the thorax, cough and expectoration of a glairy mucus. Ten days before his death, his legs and thighs which had been œdematous, became suddenly reduced, by an absorption of the liquid. He lost his strength, became pallid, and suffered so much from dyspnœa that he was bled about a week previous to his decease. Relief was obtained, but the action of the heart became feeble, and great distress was depicted in his countenance.

Sunday, March 2, 1823. He was assisted in going down stairs, when, upon attempting to speak his voice failed and he suddenly expired.

Autopsy, March 4. *Thorax* distorted anteriorly. There is an angular projection at the union of the superior and middle portions of the sternum, and a depression upon either side of that bone. That on the left is the larger; it commences four and a half inches from the middle of the sternum, and extends forwards in the intercostal space between the second and third ribs, the

distance of three inches. That on the right begins three inches from the middle of the sternum, and extends backwards two inches between the second and the third rib. On the left side, behind the margin of the pectoralis major muscle, are two cicatrices, the larger of which is one and a half inches in diameter. Between the third and the fourth rib of the same side, and adjacent to the place at which the tug iron probably entered, there is an external depression, as if made with the end of the finger. The integuments being removed, there appears to be no injury except on the anterior surface. The pectoralis major and minor muscles are both atrophied. The latter covers and adheres to a membranous substance one and a half inches long and one inch wide, occupying the space between the second and the third rib on either side. In these spaces there are no vestiges of the intercostal muscles. The lung is visible through the membrane, which is composed of two laminæ surrounded by condensed areolar tissue. This tissue is connected, by fascia-like bands, to the surrounding intercostal muscles.

The cartilage of the second rib is fractured in the middle, and the ends of the two portions are a quarter of an inch asunder, but connected by an intervening ligament. The rib, also, has been fractured two and a half inches posterior to the division in the cartilage. This piece of rib is turned upon its axis, so that the inferior edge is inwards and upwards, and has become similar to the inner and superior edge of the posterior portion of the rib. It thus forms a projection of half an inch in the interior of the thorax. The external depression is three-eighths of an inch in depth. The cartilages of the third and fourth ribs are fractured and united by ossification. That of the third is a little curved. *The space closed by a membrane*, and one inch in diameter upon the right side, is circular. The third rib is fractured, its sternal portion is diminished, and its superior edge is one-eighth of an inch lower than that of the spinal portion. The angular projection, near the upper part of the sternum, is caused by the first and second divisions of the bone being severed and turned outwards, so as to form an obtuse angle, at a point between the cartilages of the first and the second rib. The disunited ends are enlarged and connected externally, by a ligament which admits of a slight motion.

The lungs adhere to the pleuræ posteriorly. On the right side there is more than an ounce of serum in the cells of the adhesion. On the left side, anteriorly, the lung adheres to the inferior part of the displaced portion of the second rib, and to the internal surface of the membrane which incloses the space devoid of muscular fibre.

The lungs are dense and of a deep livid color. A small part of the lower lobe of the left lung is entirely normal. The right lung adheres to the membrane heretofore mentioned, as well as to the surrounding parts, to an extent of one and a half inches in diameter. The rest of the anterior portion presents no pathological appearance.

The pericardium is attached to the heart throughout nearly the whole of its surface. The adhesions are easily broken. There is nearly a teaspoonful of fluid in the cavity and near the apex of the heart.

The heart is augmented in volume, the right auricle being more so than either of the other cavities.

The abdominal and pelvic viscera are normal.

It is found that the wounds in the integuments do not precisely correspond with those of the parietes. This position of things undoubtedly facilitated a cure, and was probably owing to the fact, that the arms were raised at the moment of the occurrence of the accident.

The preparation now preserved in the museum consists of the anterior

parietes of the thorax, including the sternum and the sternal half of the first five ribs. The whole of the cicatrices and other deformities are thus exhibited. The extremity of the shaft which inflicted the wound is also preserved in the museum. It penetrated the body to the distance of twenty-one inches. The portion of that length is five inches in circumference in the middle, and six at the larger extremity. The tug-iron underneath is three and a half inches in length. *This undoubtedly entered the lung.*

The autopsy was performed, under the direction of Sir William Blizard, by W. B. Harkness and William Clift, assisted by J. W. Parkinson.

We present also the statement of this extraordinary case, as published in South's edition of Chelius' Surgery, vol. i.

T. T., aged thirty-five years, on the evening of the 13th of June, 1812, having incautiously taken off the bridle, before disengaging his horse from the harness and chaise, the animal became unruly, and T. T. catching hold of the foretop, attempted to replace the bridle; "whilst thus occupied the horse made a violent plunge, and thrust him by the end of the off-shaft against the projecting part of the chaise-house; at which instant he felt the shaft perforate his side, under the left arm; whereupon he made a violent effort to draw himself back, while the horse kept plunging forward, and he soon felt the end of the shaft pass from under his right arm, occasioning acute pain. * * * The horse continuing to press forward, occasioned on the left side a second wound, by the front tug-hook under the shaft." A person alarmed by his cries came to him, and drawing back the shaft discovered that its "end, which had confined T. T., had also entered the weather-boarding of the chaise-house, and passed through it, * * * and that he was pierced through the body by the shaft of the chaise, and apparently standing on tip-toe with both arms extended;" and that "the end projected several inches beyond the trunk of the body." The shaft was then gently withdrawn, and when released he respired two or three times, and found no alteration in his breathing; after which he walked up two flights of stairs to bed. Whilst being undressed, for the first time felt faint, and soon had extreme difficulty of breathing, feeling as he said, "as if he should be suffocated by the blood trickling on his lungs." He was very speedily bled by a large orifice to the amount of four pounds, when fainting came on, but no stimulants were used, and only a little cold water given. Upon the left side of the chest there were two wounds, the lower by the iron under the shaft, and the upper where the shaft itself entered, immediately under the arm. On the right side was also a wound in nearly the same direction, through which the shaft came out; the latter two wounds, each four inches in extent. The left shoulder and side of the chest were slightly emphysematous. He had not thrown up any blood. On the morning of the 15th, as the difficulty of breathing had much increased, with considerable pain, weight and soreness, he was bled to thirty ounces, with much relief; and in the evening, as there was fulness of the belly and nausea, a castor-oil injection and five grains of calomel were given. On the following day vomiting had come on, and also pain about the region of the diaphragm, in addition to the previous symptoms; he was therefore bled to eighteen ounces. The vomiting increased, and was accompanied with hiccough, but towards evening these were relieved by effervescing mixture. On the 17th the difficulty of breathing being worse, seventeen ounces of blood were taken away, which alleviated the symptoms; and the bowels had been cleared by the calomel, which had been taken nightly. He had no pain in his back, nor any on either side except smarting at the wounds; but he thought from the great pain and tenderness about the breast-bone that it

was broken. Next day, the breathing being very laborious, he was bled to twenty-two ounces; but, though his respiration was relieved, he had still general tenderness in the chest and epigastrie region, and therefore a large blister was applied over the front of the chest, which benefited him. On the evening of the 20th the breathing had become more difficult, and nineteen ounces of blood were withdrawn. Some threads of flannel were observed deep in the wound, under the right arm, but were not disturbed. On the 22d he had less pain and difficulty in breathing than since the accident, but complained of distressing sensations about the chest, which he could not describe. To-day his body linen was for the first time changed, and careful examination being made, not the slightest trace of injury could be found on the back. This done, it was thought advisable to take away fourteen ounces of blood, which relieved him more than before, not feeling any pain, only a smarting sensation, similar to that he had experienced in the wounds under the arms, on each side of the breast-bone internally, in the direction in which he was convinced that the shaft had passed. A blister was then reapplied, and kept open for some days. From this time he slowly recovered, and at the end of nine weeks the wounds were nearly closed. He lived for five years without inconvenience, except being put out of breath on making any exertion, sooner than usual, and having the motions of his arms backwards, or raising them upwards, restricted by a feeling of tightness across the chest. After this time he occasionally suffered from considerable difficulty of breathing, irregular pulse, and struggling rather than pulsating action of the heart. He did not take much care of himself, and, after a time, became more seriously ill, and died March 2, 1823, nearly ten years subsequent to the accident.

Examination.—The thorax was somewhat distorted, from an angular projection at the union of the upper and middle portions of the sternum, on each side of which was an irregular depression; on the left, and four inches and a half from the middle of the bone, the depression extended forwards three inches along the intercostal space between the second and third ribs; on the right, at three inches distance, the depression extended backwards two inches between the same ribs. The upper cicatrix, on the left side, was behind the margin of the great pectoral muscle, and the under one an inch below it. The right cicatrix was opposite the intercostal space of the third and fourth ribs. The *m. pectoralis minor* adhered to a membranous substance, occupying the place of the destroyed intercostal muscles, thin, smooth, strong, and transparent, through which the lung could be seen on the left side, but not on the right. The cartilage of the left second rib had been broken, and was only united by ligamentous substance; and the rib itself, also fractured two inches behind, had united, with its inner edge turned a little into the chest; the third and fourth cartilages had been fractured, but united by bone. The right third rib had been broken. On opening the chest, the lungs were found strongly adherent, at their back part, to the pleuræ. In front, on the left side, the lung adhered to the displaced second rib, and to the membrane between the second and third ribs, the adhesions extending to the mediastinum as low as the fifth rib. Another portion of lung also adhered between the third and fourth ribs, where probably the tug-iron had entered. On the right side, the lung adhered to the membrane between the ribs, to the extent of an inch and a half around its margin. The pericardium was almost entirely adherent to the heart, but not very firmly. The heart itself was larger than usual, and the cavity and fibres on the right side proportionally greater than on the left.

Maiden observes, in regard to this case, and which the examination seems to bear out fully: "I have no hesitation in declaring my firm belief that the

shaft, being small at the top and of a wedge-like form, was forced between the ribs, on the left side, into and through the cavity of the thorax, under (behind) the sternum, and out between the ribs on the right side; not suddenly, but by several distinct movements, whence the lungs, large blood-vessels, &c., escaped injury."

CASE VIII. *The chest transfixed by an iron pivot. Patient recovered.* From Dr. Earle's account of the Hunterian Museum, in *American Journal Med. Sciences*, 1841.

John Taylor, a Prussian, aged 20, in May, 1831, was employed in the early part of that year, on board the brig *Jane*, of Scarborough. On Saturday, February 6th, the vessel lying at the time in the London docks, he was at work on board, and, while guiding the pivot of the trysail-mast into the main boom, the tackle gave way, the pivot struck and penetrated his breast, traversed the body in an oblique direction, and, coming out behind, entered the deck. The trysail-mast which drove this pivot through his body, was thirty-nine feet long, and weighed about six hundred pounds. The pivot, which is still preserved in the museum, is blunt, one inch in diameter, and but five inches in length. This entered the thorax on the left side, near the sternum, in the region of the cartilages of the third and fourth ribs, and came out at a point between the tenth and eleventh ribs, a little anterior to a perpendicular drawn from the lower angle of the scapula. Upon comparing the distance between these two points, it will easily be perceived that the body must have been compressed to an inordinate degree to permit the iron to pass through, and even to enter the plank of the deck. The patient received several other injuries at the same time. His scalp was laid open, and his lower jaw and four ribs fractured. He was carried to the London Hospital, where, under the care of John Andrews, he was so nearly cured, in the course of five months, that he walked from the Hospital to the College of Surgeons and back again. He ultimately returned to his occupation as seaman. During his confinement, portions of the fractured ribs and jaw exfoliated.

In June, 1837, a few days previous to my first visit to the College of Surgeons, Taylor, being in port, called upon William Clift to let him know that he enjoyed perfect health.

CASE IX. *Removal of a portion of the left lung.* By T. B. Hale, M. D., of Minersville, Pennsylvania. *Medical Examiner*, 1855.

EDITOR MEDICAL EXAMINER.

DEAR DOCTOR: The following case has been communicated to me by my friend, Dr. Hale, of Minersville, Pa. Believing it to be unique, I am desirous of giving it to the profession through the pages of your valuable journal. The removed portion of lung is now in my possession. It is pyriform in shape, somewhat flattened, and measures about 6 inches long, $2\frac{1}{2}$ inches in diameter at the largest end, and 1 inch in diameter where it was cut across. It appears quite destitute of blood, except near the small end, where the capillaries appear quite full. The specimen is somewhat contracted in size from the action of the alcohol in which it is preserved. Very respectfully,

PORT CARBON, Dec. 21, 1854.

J. H. WYTHES, M. D.

C. D., an Irishman, aged 25 years, rather small in stature, but stoutly built, with a well developed chest, being engaged in a fight while intoxicated, received a stab in the left side, parallel with the ribs. The wound was about $1\frac{1}{4}$ inch long, and appeared to have been made with a sharp, clean-cutting

instrument. About fourteen hours after the injury, he was visited by Dr. Hale, who found, upon examination, a portion of the left lung protruding from the thorax. He was sitting up in bed, having the protruded portion supported by a broad bandage. He complained of no pain, and had suffered but little from loss of blood. There was no cough or difficulty of breathing, but on taking a full inspiration the protruded lung became filled with air, and drops of venous blood oozed from its substance. The protrusion was so tightly strangulated at the wound in the thorax, that after an hour and a half spent in unsuccessful efforts to restore it, Dr. Hale made a cautious attempt to enlarge the wound in the interosseous space. Fearing, however, the effect of a large opening into the cavity of the pleura, he was induced to desist, and consider the propriety of excision. As the protrusion looked extremely unhealthy, from the length of time since the accident and the efforts made to reduce it, making gangrene not an improbable result, excision seemed to be the only resource. Dr. H. contemplated applying a ligature at the base of the protruded lung, but on making two experimental incisions into its substance, and no blood flowing, this was not judged necessary, but the mass was at once excised, and the remaining portion pushed back through the wound in the interosseous space, the orifice of which was then closed with two stitches and strips of adhesive plaster. The patient was then directed to lie quietly on his back, and a mixture of two parts syr. prun. virgin., and one part syr. opii prescribed; a table-spoonful to be given every two hours for the purpose of allaying irritation in the bronchial tubes. On the second day, Dr. Hale found him in a favorable condition, and on the sixth day he walked five miles to visit his physician, suffering in no manner from the loss of the portion of lung. For the last three months he has labored constantly in the coal mines, without inconvenience.

The speedy recovery of the patient appears to have been due to adhesive inflammation between the adjacent walls of the pleura, through the wound in which the protruded lung was strangulated. In all probability the pulmonary and the costal pleura and the substance of the lung are all connected in the same cicatrix.

Exceptions have been made to the practice pursued in this case. If air filled the protruded portion of the lung, and blood oozed from it, the cutting off of 6 inches in length and $2\frac{1}{2}$ inches in diameter, or even 1 inch in diameter, was certainly a bold operation. We would prefer to have enlarged the opening between the ribs.

CASE X. *Fifteen buckshot received in the chest from a gun ten paces distant; patient survived eleven days.* By Paul F. Eve, M. D. Southern Med. and Surg. Journal, 1846.

Gunshot wounds are occasionally met with in civil practice, not devoid of interest, and the particulars of the one about to be transcribed from my notebook, will at least exhibit the extent of suffering which may be endured by the human system in desperate injuries. With a view to placing the case fully and at once before the reader, the report is here given of the *post-mortem* examination, made to the jury at the coroner's inquest, held the 7th of July, 1845, and signed by F. Jeter Martin, Robert Campbell, jun., Edward H. Holliday, George M. Newton, Paul F. Eve, and H. F. Campbell. "Having been requested to examine the body of J. W. T., we report that we find nineteen wounds on his person—ten of these are on the left side and back of his chest, four on the right and six on the left side of the spinal column—seven are on the left arm, making a shattered (comminuted) fracture of the bone, extending up to within two and a half inches of the shoulder-joint—and two

are in the right arm, dividing the main (brachial) artery. Within the thorax, we find on the left side about seven pints of bloody fluid (serum), and two buckshot which had passed through the lung of that side. We therefore give it as our opinion, that the deceased came to his death in consequence of the wounds above described."

Mr. T. was 24 years old, of good constitution, well made, and quite vigorous. On the morning of the 26th, he had taken a light breakfast, and at 10½ o'clock was shot by a double-barrelled gun, charged with about thirty buck-shot. The person firing upon him approached from behind, but Mr. T. hearing a noise, was in the act of turning round when stricken by the first discharge. He had thrust his right hand into his pocket, and had seized a pistol, but found he had not the power to use it in self-defence. His hat having fallen off, he tried to pick it up with the left hand; he felt he could touch it with his fingers, but could not grasp it. He now walked a few steps to get round a house, when he received a part of the contents of the second barrel. After this, he ran the distance of about one hundred yards, and fell to the ground exhausted.

I reached the patient in some twenty minutes after he was shot, and found Dr. Campbell, and Messrs. Martin and Campbell, students of medicine, already in attendance. Some of the wounds had been probed, and two or three buck-shot of a large size extracted. Pulsation at the wrist of the left side had been distinctly felt by Dr. C., but now the patient had fainted. The fracture of the left arm was compound and comminuted, made so by several shot entering together; but the principal hemorrhage had been from the right arm, at the wrist of which side no pulsation had been felt after the accident. We gave some brandy and water, applied temporary dressings to the arms, and had our patient conveyed home upon a mattress laid on a door.

At 12 M., there was some reaction; stopped the brandy and water, and applied roller bandages and splints to each forearm. Patient now complains of most distressing pain on the left side of the spinal column, and passing down to the left kidney; desires to be placed on the right side, but can lie on it only for a few seconds.

Dr. J. A. Eve was now added to the consultation. At 1 o'clock, gave ½ gr. sulphate of morphine to relieve his suffering, and allowed cold water to allay his thirst. The thermometer this day at 4 P. M., was 96°, and our patient was much oppressed by heat and the crowd which continually surrounded him. We omit the daily report.

* * * * *

July 7. He had no pulse for some time last night, but revived a little at 3 A. M. He still has to be supported in the sitting position, and his respiration is becoming every moment more difficult. He died at 1 P. M.—making eleven days and three and a half hours after he was wounded.

To remove the impression, that as six shot entered on the left of the spine, and four openings or wounds existed on the right side, and two of the buck-shot were found in the left pleural cavity, therefore, four of these six shot had traversed or passed through the chest—we remark, that three or four shot were taken out immediately after the injury, by Dr. Campbell, two were gotten out by myself, and two others by Dr. Newton, who made the post-mortem examination, and these last four were superficially situated, upon the left side of the chest and near the spinal column. In the account given above, I have adopted the generally received opinion that Mr. T. was shot with both barrels of the gun, and this was his own declaration. But my own impression has always been, that only the discharge of the first barrel struck him—seven shot entered the left arm, six struck the chest to the left of the spine, and

two others passing through a portion of the skin and muscles to the right side (making the four openings), cut the brachial artery of the right arm. Seven, six, and two, will make the fifteen shot with which the gun was charged. The condition of the patient immediately after being wounded, and his living long enough for the tracks made by the shot to become obliterated, have prevented this opinion being corrected or verified. Of course I would not impeach the words of a dying man, but think he may have been deceived by the agitation and excitement of the moment.

The two buckshot were found lying in the cavity of the left pleura, and had passed through the inferior lobe of the left lung, being that portion not much distended in ordinary respiration, and which was hepatized—they were probably arrested by the vertebræ.

CASE XI. *Simultaneous wound of both lungs; recovery.* By A. N. Ruddock, Esq. British and Foreign Med.-Chir. Review, 1842, vol. xxxvii.

Early in the morning of the 10th May, 1838, a police constable, named Silas Perrot, aged 22, detected a housebreaker robbing some premises which stood in a very retired situation. The policeman attempted to take the man into custody, which he strenuously resisted, and a struggle ensued, during which the latter attempted to throw him into the river, and at last, finding he was likely to be apprehended, drew a long knife with a wooden handle, similar to that used by shoemakers, and gave the constable two desperate stabs in the body.

When seen by Mr. Ruddock, about two hours afterwards, he was tolerably collected, but in a state of extreme exhaustion from the severe nature of the wounds and the consequent loss of blood, which was considerable; much frothy blood was passing from his mouth; he had great difficulty of breathing, with constant cough, and a very small pulse, varying from 140 to 150.

On the right side of the chest was found, on examination, a penetrating wound of rather more than an inch in width, between the seventh and eighth ribs, about four or five inches below, and in a direct line from the axilla; air was passing freely through the wound, and there was considerable emphysema. On the left side there was a corresponding wound, also between the seventh and eighth ribs, but higher up and more posteriorly; very little air had escaped into the cellular membrane, but it could be felt crackling underneath a considerable portion of the latissimus dorsi. No doubt could exist as to the lungs being wounded on both sides. As there was no fracture of the ribs, and the wounds were clean, they were closed with adhesive plaster, warmth was applied to the extremities, and some tea administered.

By nine o'clock A. M., reaction had taken place, and his pulse had become tolerably steady at 120. Venesection to twenty ounces; a mixture of spermaceti and ipecacuanha wine to be taken every three or four hours: fever diet.

At three, P. M., he was laboring under more severe symptoms; his breathing was much oppressed; he had a good deal of pain and uneasiness about his chest, with a full pulse. Venesection to thirty-four ounces; this afforded much relief. At nine in the evening, the symptoms becoming again aggravated, thirty ounces of blood were taken, and some opium administered.

On the following day he was much better, and on the 12th of May, two days after the receipt of the injury, the wounds of the lungs had apparently closed, no air passing through them. From this time he slowly but gradually progressed, and left his bed about three weeks after the injury. The bloody expectoration continued for five or six days, and the emphysema gradually subsided. The wound on the right side of the chest did not heal for a month.

Adhesion of the pleura on the right side took place to a considerable extent, covering a space as large as the hand : on the left side, the state of the parts is not so easily ascertained, owing to the thick layer of muscle.

Since that time he has had several attacks of shortness of breath and pain in the side, but they have all given way to a day's confinement in bed, and a mixture of tartar emetic. These attacks have lately been less frequent.

CASE XII. *Voluntary expulsion of air through an opening made by a musket-ball in the chest.*

Dr. A. S. Thompson, surgeon to the 58th Regt. of foot, English army, describes in the *British and Foreign Med.-Chir. Review* for April, 1855, the case of the famous chief Hongi, the Napoleon of New Zealand, who had a musket wound through the chest and lungs, and lived for several years with a hole in his back, through which he could produce a whistling sound by the expulsion of air for the entertainment of his friends when in a gay humor. This wound, however, was ultimately the cause of his death.

SECTION IV.

WOUNDS OF THE HEART.

In the May No., 1855, of the *New York Journal of Medicine*, its senior editor, Samuel S. Purple, M. D., has published an elaborate article entitled *Statistical observations on wounds of the Heart, and of their relations to Forensic Medicine*, with a table of forty-two recorded cases.

We wish we had space to present this valuable paper to our readers. We commend it to their attention.

In regard to what part of the heart is most exposed to be wounded, we find in the collection of fifty-four cases by M. Oliver, the right ventricle was injured in twenty-nine, the left ventricle in twelve, both ventricles in nine, the right auricle in three, and the left in one case. This author states that of twenty-nine cases of penetrating wounds of the cavities of the heart, only two proved fatal within forty-eight hours; in others death took place at varying periods of from four to twenty-eight days after the receipt of the wound.

CASE I. *Concussion of the heart from a pistol-shot.* By Mr. Lees. Dublin Journal Med. Sciences, 1837.

Two French students quarrelled at supper: they wished to settle their dispute on the spot. However, as they were both very tipsy and infuriated, we prevented them. The next morning they met, and as they were determined that one should die, their friends prevailed on them only to load one of the pistols, and then leaving both on the table, to draw lots as to who should take the first chance of the pistols, of course being ignorant which was the loaded one; it was loaded with four bullets. They then mutually felt for the point of the chest, against which at that moment each stroke of the heart told with increased violence, and pressing firmly against this part, they fired; one of them fell to the ground in a state of insensibility, but on examining him they found merely a slight flesh wound at the part to which the pistol had been applied, and with a little care he soon came to himself. I saw him about three hours after this had occurred. He was then in a state of great anxiety which he could not account for, as he expressed more an unpleasant sensation of weight about his heart than actual pain; there was great tendency to fainting, the pulse intermitted, with severe palpitation of the heart; under proper treatment all these symptoms subsided, and he recovered perfectly in a short time. I consider

myself peculiarly fortunate in having witnessed this case, for in affairs of this kind it is generally the right side which is wounded, owing to the position we naturally assume; and also it exemplifies in a striking manner the power of compressed air in resisting the expansive force of gases.

CASE II. *Rupture of the heart from violence.* By E. R. Maxson, M. D. Buffalo Medical Journal, 1831.

In March, of 1849, Mrs. K——, a lady of thirty, of common health, while carrying her child of two years old, playfully lifted it over her head, when she felt an uneasiness in the cardiac region. This was soon followed by a sensation of warmth, and an unusual fluttering of the heart, which, however, partially subsided in a little time.

She now kept about the house most of the time for the following two days, though she was somewhat indisposed from a feeling of warmth and fulness, or pressure, about the heart, with occasional irregular action of that organ. The preceding symptoms were followed, towards the close of the second day, by slight syncope, dizziness, and a general feeling of uneasiness and prostration. On retiring to rest, at evening, she became thirsty and called for drink, and the next moment she was dead.

I was invited, by the politeness of two medical gentlemen, to assist in making an examination; which we did 48 hours after death. We found the pericardium filled with coagulated blood, making an envelope, nearly covering the heart. There was a rupture of the right auricle sufficiently large to admit a crow-quill, the edges being loose, thin, and somewhat ragged.

CASE III. *Rupture of the heart in getting up too soon after delivery.* By James M'Nicol, of Birkenhead, England. Lancet, 1852.

Mrs. N——, a lady about forty years of age, was safely delivered of a boy on the 19th of January. The labor was perfectly natural, and convalescence completed in about twelve days after the birth. Two days after she had been pronounced well (February 2d), a messenger arrived in haste at my house, desiring my presence immediately at the patient's house, she having been suddenly taken ill. Not being at home at the moment, my esteemed friend, Mr. Edgar, kindly went to see the patient. About ten minutes after the messenger left, I arrived home, and from thence proceeded to the patient's house, where I found Mr. Edgar. The patient was perfectly blanched in the face, gasping for breath, and evidently dying. She only survived a few minutes after my arrival. The nurse stated that the lady was in the act of getting out of bed, when she suddenly exclaimed, "Oh! nurse, something has given way!—I'm fainting." She was put to bed, when she told the nurse to rub the region of the heart, as she felt much pain there. A mustard plaster was applied to the cardiac region, and brandy and water administered; but all in vain. She died in about twenty minutes after the attack. A post-mortem examination was made by myself and Mr. Edgar, twenty-two hours after death. The abdominal viscera were found healthy; the mucous membrane of the uterus exceedingly vascular, as might have been expected after the recent birth; in other respects it was healthy. Old pleuritic adhesions were found on the right side of the chest; lungs healthy. Upon opening the pericardium, it was found filled with blood; the aorta was healthy; but upon examining the heart, it was found that a rupture existed in the walls of the right ventricle. This opening was about half an inch in length, the walls of the right ventricle being exceedingly thin; fatty degeneration of the heart existed, although not to any great extent.

CASE IV. *Opening of the ventricle by a dagger; patient living hours after it.*

The Duke de Berri, heir to the French throne, in 1826 was stabbed by an assassin, as he was leaving the theatre to get into his carriage. The right ventricle of the heart was opened, and he died from the loss of blood. Steifensand reprehended Dupuytren for having probed the external wound, and thus opened it every two hours, as he said, to prevent suffocation: but Mr. Guthrie says if death were actually impending from filling the cavity of the chest, there was nothing to be done but to give relief at all hazards.

We respectfully suggest, and with very great deference to these high authorities, why not bleed the patient under these desperate circumstances? Would not this have prevented suffocation by diverting the blood from the injured lung, and thus allow the wound to heal?

CASE V. *Wound of the heart penetrating probably the right ventricle; patient recovered.* Read to the Medical Association of the State of Alabama, 1850. By Charles E. Lavender, M. D., of Selma.

That the heart was opened in this instance, there cannot be a doubt in any one who will read the particulars of the case. To the fact that the patient was a member of the Doctor's household, he may owe his life. The case certainly was most judiciously treated.

James H——, student, aged 19 years, of good health and sound constitution, was stabbed, on the 9th of April, 1850, in the left breast, by a fellow-student, with a pocket knife, the blade of which was about three inches long, three-fourths of an inch wide in the middle, and very narrow at the point.

When I saw him, at 4 o'clock P. M., about five minutes after the wound was inflicted, he was laid on a long table, on his right side, with his head slightly raised. He was vomiting, with jaws rather rigid; cold sweat on his face; eyes drawn back, pupils much dilated; countenance pale and deathly; respiration irregular, interrupted, and terminating in deep sighs; action of the heart entirely suspended; clothes dripping with blood. On tearing away the clothes from the chest, a wound presented itself in the left side, between the sternum and the nipple, about two inches anterior to, and three-fourths of an inch below the left nipple, between the fourth and fifth ribs, at their cartilaginous extremities, the greater extent of wound being between the cartilages. The wound, from which venous blood was flowing in a full, continuous stream, was about one inch in extent, in a direction across the body; the edges of the knife having struck the lower side of the cartilage and the upper side of the rib. The cut edges of the intercostal muscles were distinctly seen, through which a dark opening, about the size of a man's forefinger, allowed the blood to flow. One gallon and a half of blood was supposed to be lost; it could not have been less than one gallon. The right ventricle of the heart was evidently opened, and I supposed he could not live fifteen minutes.

I turned him hastily upon his back, raised his right arm, which was pendulous, and placed it by his side, dashed a large towel, just dipped in a bucket of cold water, on his chest; sprinkled cold water and spirits of camphor in his face, and secured free ventilation. The bleeding stopped instantly, but the breathing continued oppressed, interrupted, and somewhat stertorous. About five minutes after the bleeding ceased, a slight flutter was felt in the heart, and was distinctly appreciable under the palm of my hand, at irregular intervals, for a minute or more, when pulsation became perceptible, and in a few minutes more there was pulsation at the wrist. He now swallowed water, and spoke incoherently; breath during this time cold. A mattress was drawn

under and blankets thrown over him, and he was kept on his back, with his shoulders slightly elevated. At about 5 o'clock he recognized persons, spoke hurriedly, called for persons, and supposed he was dying; but he afterwards remembered nothing that occurred before 6 o'clock, at which time he became exceedingly restless, complained of pain in his breast and head, with some thirst. Pulse feeble, interrupted, and over one hundred.

When the external bleeding ceased, I apprehended internal hemorrhage; but no evidence of this presented itself at that time, or subsequently. About 9 o'clock, he began to grow warm. At 10, he became exceedingly restless, and complained of intense suffering, but of no acute pain. Pulse about 120, intermitting; respiration interrupted, and at times as frequent as 60 to the minute. From 12 till 3 A. M., but little hope was entertained of his living till daylight, when his nervous system yielded to the quieting influences of morphine, about two grains of which had been given, at intervals. Towards morning he enjoyed some refreshing sleep.

Fearful of a return of the hemorrhage, or of disturbance to the nervous centres, I did not allow him to be removed from the academy, where I first found him, till 3 P. M. on the following day. He was then removed to his boarding-house, with such care as to cause no disturbance. He suffered somewhat from restlessness and thirst. The first was remedied by small doses of morphine, the latter by cool subacid drinks. At night, he suffered from distension of the bladder; not being allowed to change position, he had not been able to empty it. Catheter was used.

11th. Passed a restless night; interrupted slumber; frequent starting; hot head; some delirium. Considerable febrile excitement through the day; skin hot and dry, but pale; countenance shrunken, and indicative of much distress; tongue red and dry; pulse thready and irregular, about 120; complete prostration of muscular power. Lies on his back; if turned to the right side, evinces but little pain, but soon turns back, with a sigh and heavy breathing; if turned on the left, suffers pain in the direction of the wound, is much distressed, and rolls back immediately. Bowels inactive; gave enemata. Bladder so torpid as not to expel the urine, when the catheter was introduced, without external pressure. Cooling drinks, laxatives, occasionally small doses of morphine.

12th. Rested rather better last night. But little alteration in symptoms; rather more thirst. Skin and pulse somewhat softened by small doses of antim. and morph. Bowels and bladder as before.

13th and 14th. Rests some better. Pulse ranging about 100, rather light; still some starting in sleep; respiration not so quick, but still heavy; some light delirium; tongue coated with whitish fur; loathing of food; no voluntary evacuations. Use catheter every twelve hours, and enemata occasionally.

15th and 16th. Slowly improving; rests better. No change in condition of bladder or bowels. Used spirits turpentine, with mild mercurials, to act on secretions.

17th and 18th. Not doing so well. Constant fever; pulse rather full, about 100; veins full. Can lie on neither side; occasional pains, more or less acute, from the external wound through the chest to the spine. Some action on bowels; bladder totally inactive, air passing in through the instrument when pressure is removed, after emptying that viscus. Gave a few grains of quinine, and small doses of morph. and ipecac.

19th. Rested pretty well last night. Fever subsided; skin cool and soft; moderate action on bowels. Drew off a pint of urine; yet, notwithstanding this distension of the bladder, some air rushed in when the catheter was first

introduced. Tongue becoming clean; no thirst. Uses strawberries, which have constituted his only subsistence. Looks more lively; breathes well.

20th. Improving. Wound healed; no pain; can lie comfortably on his right side. Some appetite; takes tea and toast, and this day ate a young pigeon broiled. Pulse 84

21st. Rested well, without anodynes. This day passed urine without help, for the first time. Bowels in a healthy condition; appetite good. Sat up in a chair for some minutes, but with much fatigue. Pulse soft, 82; breathing good.

May 1. Has continued to improve slowly. Sets up for hours, and walks about the house.

2d. Rode out, without fatigue.

4th. Left for home, on steamer Isabella.

There was a distinct bellows sound in the heart, for about two weeks, whose swells were not synchronous with arterial pulsation. This sound grew less distinct, till it was entirely lost.

I have seen Mr. H. frequently during the summer. He has been well, and is now enjoying fine health. December, 1850.

CASE VI. *The end of a sword found in the heart of a patient living several hours after being wounded.* By Mr. Lees. Dublin Journal Medical Sciences, 1837.

In the Museum at Martinique is preserved a heart, with the end of a sword five inches in length impacted in it. The case was that of an officer, who, in a duel, received a sword wound in the right side of the chest; the point of the weapon broke, and the seconds supposing it to have been lost in the grass, walked with him to the hospital, where he expressed so little uneasiness, that the surgeon, supposing it to be a mere flesh wound, allowed him to return on board his ship, where he continued without any suffering the whole of that day, but at night very severe symptoms supervened, and he died next day; on examination, it was found that the point of the sword had passed through the right auricle, and wounded the left lung.

CASE VII. *A wound of the heart plugged by a fractured rib; patient lived some hours.* By Mr. Lees. Dublin Med. Journal, 1837.

A brewer's man had fallen under a dray, when it was heavily laden, which passed over his chest; he was lifted up, and complained of pain and weakness, but was able to continue sitting on the side of the dray driving the horse for nearly an hour, when being in the vicinity of the hospital he thought he might as well get himself examined: he walked in, and lay on a bed, but on turning on his side he suddenly expired. On dissection, it was found that the fifth rib was fractured, and that the extremity of one portion had penetrated the pericardium, but had freed itself from the heart; and this, as Mr. Wilkin observes, accounts for the sudden death of the man. For it is probable, that the portion of rib had filled up the wound of the heart, and thus prevented any hemorrhage until his arrival at the hospital; when, on its coming out, the sudden effusion of blood into the pericardium caused sudden death; there had no blood escaped outside of the pericardium.

CASE VIII. *The heart transfixcd by an iron stilet; patient lived twenty days.* By Mr. Lees. Dublin Med. Journal, 1837.

Orfila quotes an interesting observation in his *Médecine Légale*, of a workman who, in a melancholic mood, stabbed himself with a sharp stilet, between the fifth and sixth ribs of the left side, on the 24th of May. He was brought

to the hospital on the 26th, in a state of great collapse, the pulse small, intermitting, respiration hurried, great anxiety, and severe pain felt : on touching the wound, which was nearly cicatrized, but just below it, a peculiar thrill could be heard, or as it is expressly denominated a *crepitation ondulense*, similar to what can be heard in a varicose aneurism : the horizontal position caused great pain. On the third of June he had severe rigors, followed by erysipelas of the face, and he died on the 13th, that is, twenty days after the receipt of the wound ; on examination of the body the pericardium was found to contain ten ounces of fetid bloody serum ; in the inferior third of the right ventricle was impacted an iron stilet, which penetrating the septum, could be felt in the left ventricle.

CASE IX. *The heart transfixed by a darning-needle in an attempt to commit suicide ; its extraction, and recovery of the patient.* By James Lynch O'Connor, M.D., of the British Army. London Med. Gazette.

Mr. J. H., a graduate of a British University, aged 30, was visited by me 20th April, 1821, under the following circumstances : He had lost his passage to Europe and that of his family (which was paid for by subscription), through his own imprudence. I found him in a sitting posture, perspiring profusely, with hurried respiration, and all the symptoms of acute inflammation of the heart or its membranes. I bled him in a full stream to sixty ounces, when deliquium coming on, he was able to lie down. The anxious countenance was nearly removed, and the voice, which before was scarcely audible, became more distinct. I remained with him for about forty minutes, when the previous symptoms returned with unusual violence ; so much so, that I recommended his attendants to send for his friends, as I was apprehensive of immediate dissolution, and insisted on Dr. Williams being called in, as well as any other medical man he might wish. He obstinately opposed any further advice in so earnest a manner that I began to suspect he had some secret to conceal, and made so earnest an appeal to him regarding his orphan children, that he burst into tears, and stated that he had introduced a darning-needle for the purpose of self destruction, as he believed his object might thus be effected without detection, or disgrace to his profession and family ; that he took half an ounce of laudanum previously, from the effect of which he slept eight hours, and after that the pain gradually increased to its present state.

Under these circumstances I sent for Dr. Williams, who said there was evidently carditis, but would not credit the introduction of the needle after he had carefully examined the part, which was situated between the fifth and sixth ribs. However, it was determined to make an incision down on the part, in conformity with the patient's desire, when the needle, three inches and a half in length, was found on a line with the external intercostal muscles. I attempted to secure it with the dressing forceps, but from the motion attending hurried respiration I could not succeed. Under these circumstances I sent for a watchmaker's pliers, with which I succeeded in extracting it. The moment the needle was extracted all the symptoms were gradually relieved, and in an hour after he merely complained of the incision. Purgative medicines were administered, and he was put upon low diet. In five days he was discharged from my care, and returned to Europe, where he arrived in perfect health, and lived for upwards of ten years.

(Signed)

JAS. LYNCH O'CONNOR, M.D.

CASE X. *Fatal pericarditis induced by a needle in the heart.* Pattison's Medical Register.

Dr. Renauldin and M. Boujet, of the Hôpital Beaujon, communicated the particulars of this very curious case. A man, aged 63, had come from the country to Paris, with the view of settling some of his affairs. It was soon discovered that he labored under suicidal mania; he wrote a letter, that he was to die in five or six days, and he kept his bed, without taking any nourishment, excepting a little colored water. One night he fastened a cord round his neck, and when he was thus found in the morning, he swore that some savages had tried to strangle him.

On being taken to the Hôpital Beaujon, he complained of an asthma and oppression at the chest. Percussion elicited a duller sound than natural, at the right anterior part of the chest, and the respiratory murmur was found to be wanting there. The respirations were 27 in the minute, the pulse 129, full and hard. He could lie on either side; for a few days he found relief from the means which were employed; but upon the fifth day after his admission, the dyspnœa and oppression increased exceedingly, and while attempting to speak, he suddenly fell back and died.

Dissection.—The pericardium was distended with two pints of fluid; the bag was much thickened by inflammation, and its inner surface granulated, and lined with layers of albumen. The heart, at its apex, had contracted an adhesion to it. On cutting open the right ventricle, a needle, three inches, at least, long, was found fairly imbedded within its walls; its direction was from before backwards, and from above downwards; and it appeared to have penetrated into the cavity of the ventricle. Probably it had been introduced through one of the intercostal spaces, but no trace of any cicatrix, however small, could be found; how long it had been there, there were no means of discovering; the monomania had existed for several weeks. Perhaps this state of mind was the cause why the patient did not complain of any uneasiness or pain in the part.

CASE XI. *A large needle removed from the heart after three days' sojourn in it without ill consequences.* Bulletin Général de Thérapeutique—Southern Med. and Surg. Journal, 1846.

This case occurred in the service of M. Trélat, at the Salpêtrière. On the twenty-third of August, Miss Q—— in a fit of despondency plunged a needle in the region of the heart between the sixth and seventh ribs. She immediately declared that she was about to die. An examination did not detect the presence of any foreign body; her pulse was calm, and there were no unpleasant symptoms. She passed a good night, and on the next day ate as usual. A slight impression as of a foreign body could now be perceived in the region of the heart, and pressure at this point produced slight pain. The absence, however, of any symptoms of disorder prevented any attempts at extraction. On the twenty-sixth of August she complained that a large needle was permitted to remain in her heart. Having now learned the size of the foreign body, its extraction was immediately attempted. It was seized with a pair of dissecting forceps, and it was not without great surprise that we saw come forth from the wound a needle of large size, which had been plunged perpendicularly into the heart, between the sixth and seventh ribs. The needle was about two inches in length. It had become oxydized by remaining in the wound so long. This needle had remained in the heart for three days, yet it had produced no disorder in that organ—it had neither irritated it, nor modified its sensibility, for its pulsations were at all times uniform.

CASE XII. *A needle found in the heart.* By John Neill, M. D., Prof. of Surgery in the Pennsylvania Med. College. Medical Examiner, 1849.

Upon the dissection of a black male subject, brought into the anatomical room of the University of Pennsylvania, about the middle of December, my attention was directed by a student to a foreign body in the heart. At first, I supposed that it might have been introduced after death, accidentally dropping into the cavity of the pericardium, during the process of stitching after injection; but upon more careful examination of the surface of the heart, no orifice was detected by which it could have entered. I removed the heart and placed it in alcohol, in order to examine it with care.

The pathological condition of the contiguous viscera could not be made out very satisfactorily, on account of the length of the period which had elapsed since death, and from the fact, that an antiseptic injection (chlor. of zinc) had been used, which destroys color, and coagulates albumen; there were, however, marks of chronic disease evident, in adhesions of the pleura and serous pericardium; there was also evidence of peritoneal inflammation.

After the heart had been hardened in alcohol, and cleanly washed of clots, I found imbedded in the external wall of the left ventricle, a broken needle, with its point directed forwards towards the apex of the heart; it was much oxydized, and could not be moved from its position, until the cyst containing it was split up. The broken end encroached upon the cavity of the ventricle, being actually contained in one of the columnæ carneæ; the needle was two inches in length, and a line in thickness, belonging to a variety called *worsted needles*.

I learn, through the politeness of Dr. Klapp, physician to the Moyamensing prison, that this man was admitted May 11th, 1847, in rather feeble health; but continued to work for more than a year before complaining of any inconvenience about his chest. When removed to the infirmary, he had severe cough, with some slight constriction in breathing, and occasional palpitation. These symptoms, though never very urgent, continued until his death. Though never delirious, and able to answer questions to the last, he never spoke of having received any injury of the kind, and had never manifested any suicidal tendency.

CASE XIII. *Lacerated wound of the heart by a fragment of wood; healing of the wound; death on the thirty-seventh day.* By Thomas Dorris. Transactions of the Provincial Med. and Surg. Association—American Journal Med. Sciences, 1834.

On Saturday evening, January 19th, 1833, I was summoned to attend Wm. Mills, aged ten, living at Boughton, two miles from Upton. When I arrived, his parents informed me that their son had shot himself, with a gun made out of the handle of a telescope toasting-fork. To form the breech of the gun, he had driven a plug of wood, about three inches in length, into the handle of the fork. The touch-hole of the gun was made after the charge of powder had been deposited in the hollow part of the handle. The consequence was, that when the gunpowder exploded, it forced the artificial breech, or piece of stick from the barrel part of the gun with such violence that it entered the thorax of the boy, on the right side, between the third and fourth ribs, and disappeared. Immediately after the accident, the boy walked home, a distance of about forty yards.

By the time I saw him he had lost a considerable quantity of blood, and appeared very faint; when I turned him on his right side, a stream of venous blood issued from the orifice through which the stick entered the thorax. Several hours elapsed before any degree of reaction took place. He complained of no pain.

For the first ten days or a fortnight after the accident, he appeared to be recovering, and once during that time walked into his garden and back, a distance of about eighty yards; and whilst there he amused himself with his flowers, and even stirred the mould. He always said he was well, and was often cheerful, and even merry. There was no peculiar expression of countenance, excepting that his eyes were rather too bright.

After the first fortnight he visibly emaciated, and had frequent rigors, which were always followed by faintness. The pulse was very quick. There was no cough nor spitting of blood. The secretions were healthy. He had no pain throughout his illness.

He died on the 25th of February, five weeks and two days after the occurrence of the accident.

Dissection.—On opening the thorax, a small cicatrix was visible between the cartilages of the third and fourth ribs, on the right side, about half an inch from the sternum.

The lungs appeared healthy, with the exception of a small tubercle at the right, and at its root, near the pulmonary artery, a small blue mark in the cellular tissue, corresponding in size with the cicatrix on the parietes of the chest.

Half an ounce of serum was contained in the pericardium.

When an incision was made into the heart, so as to expose the right auricle and ventricle, we were astonished to find, lodged in that ventricle, the stick which the boy had used as the breech of the gun, the one end of it pressing against the extreme part of the ventricle, near the apex of the heart, and forcing itself between the columnæ carneæ and the internal surface of the heart; the other end resting upon the auriculo-ventricular valve, and tearing part of its delicate structure, and being itself incrustated with a thick coagulum as large as a walnut.

We searched in vain for any wound, either in the heart itself or in the pericardium, by which the stick could have found its way into the ventricle.

It was conjectured that the stick had traversed the mediastinum, penetrated the posterior lobe of the right lung, entered the vena cava, and been carried by the current of blood into the heart.

CASE XIV. *Gunshot wound of the heart without perforation of the pericardium.* Lancet, 1846.

Professor Holmes records, in the *British American Journal*, a case which seems to show the possibility of such an occurrence. An individual had received a gunshot wound of the left side of the chest, and died soon after. On removing the anterior walls of this cavity, "the appearances presented were, a bloody ecchymosed condition of the anterior part of the left lung, as it laps over the pericardium, a bloody and infiltrated state of the cellular substance lying on the pericardium, and an ecchymosis of the extent of about an inch and a half, filling the anterior edge of the right lung, where it lies in contact with the pericardium. The pericardium evidently contained a large quantity of fluid, the nature of which was denoted by the color of the membrane."

The lead which had caused the injury was found in the right pleural cavity, but its course could not be traced. No perforation of the pericardium, which was filled with blood and serum, could be found; but on its being laid open, "There was seen on the anterior wall of the heart, penetrating the right ventricle, a transverse linear opening without laceration at the margins, which were smooth, and rather turned inwards, and sufficiently large to admit the finger."

The difficulty of explaining this occurrence is considered by the writer; and he first argues that this injury was not likely to be the result of a sponta-

neous rupture. He refers to cases recorded by writers on military surgery, which show that pieces of linen and other cloths have been sometimes driven without being torn, into wounds; and thus that balls have been withdrawn inclosed in a kind of purse. Somewhat similar is the author's explanation of the present occurrence: "Entertaining," he says, "no doubt that the wound was caused by the direct contact of the ball, driving the pericardium before it, I think the manner of its formation may be more readily understood by supposing that at the instant of being struck, the heart was in the act of contraction, its fibres hard and rigid from their muscular action. In this state the ball suddenly impinging produced an effect similar to what happens to an over braced harp-string when struck. The fibres snapped across.

CASE XV. *Gunshot wound; three shots in the ventricle for sixty-seven days before causing death.* By Leonard Randal, M. D., of Tennessee. Western Journal of Medicine—American Journal of Medical Sciences, 1829.

A negro boy, aged fifteen, was accidentally shot, April 5th, 1828, with a fowling-piece. When the gun was discharged, the boy was but six feet from its muzzle, and the whole charge of shot entered on the left side of the sternum about an inch and a half below its lower extremity. He fell to the ground immediately, his pulse became scarcely perceptible, and his breathing difficult; the hemorrhage was not profuse. He soon expectorated blood freely, and on a dose of oil being given him, he vomited, rejecting with the oil a large quantity of wind. On the morning of the 7th of April he became extremely restless, his pulse was weak and intermittent; syncope came on, and he appeared dying; stimulants were given, and he revived. In the afternoon, his bowels were opened by medicine which had been given in the morning, and he seemed much better.

April 8. In the morning much better; afternoon fever, pain in the breast, œdematous swellings of feet and legs. Next morning, (9th,) the wound began to slough, he was restless, his pulse very weak, frequent, and intermittent, extremities cold, bloody expectoration, respiration difficult. The next afternoon considerable fever. "11th. The wound had sloughed so considerably as to form a hole into the thorax, two-thirds of an inch in diameter." On the 12th, the wound put on a healthy appearance, and began to granulate; it afterwards continued to heal, "and in three or four weeks was completely cicatrized; the œdematous swelling of the lower extremities disappeared in a week or two after the last date, and although extremely emaciated, he was able to walk about, and had many appearances of getting well. When in this promising condition, he relapsed, apparently from indulging himself too freely in a meal of strong diet. From this relapse he did not recover, a hectic fever supervened, and he died on the night of the 11th of June, sixty-seven days after the accident."

On examination of the body by Dr. Randal, assisted by Dr. Hudspeth, who had attended the patient with Dr. R., they found several shot lodged against the ribs, and the membranous covering of the ribs and cartilages inflamed; part of the pericardium adhering to the surface of the heart; the left lobe of the lungs inflamed and adhering to the pleura, and, lodged in various parts of the substance of the former, a number of shot. The right lobe nearly obliterated, dense, its cellular substance entirely lost, a small portion of serum in the pleura. The heart was considerably enlarged, its parietes in some parts nearly cartilaginous, and in the cavity of the right ventricle there were lying loose, three shot. This ventricle was greatly enlarged, and lined with a thick coat from which there projected numerous papillæ of a dun color, giving it the appearance of the upper surface of the tongue of an ox. On opening the

right auricle, we found *two shot in its cavity*, also lying detached. The internal surface of the auricle did not appear to have sustained much injury from their presence. The shot had entered the heart about one-third of the way from its base to its apex; the wounds made by them were at a little distance from each other; they had all cicatrized, but the spots were plainly to be seen. In the cavity of the peritoneum, as in that of the pleura, there was a small quantity of effused serum. The liver appeared to be somewhat enlarged, but not otherwise much diseased, except about the gall-bladder and its duct, where there were some gangrenous appearances, and part of the colon was also gangrenous."

CASE XVI. *A bullet found in the heart; yet there was no opening by which it entered.* By Dr. A. Christison. *Edinburgh Monthly Journal—Ranking's Abstract*, 1853.

The following singular case is taken from an article entitled "Notes of Observations, at the Field-Hospital of Rangoon, and the Convalescent Hospital at Amherst, during the late military operations in Burmah." Dr. Christison thinks that the only conceivable way in which the ball could find its way into the ventricle is by one of the pulmonary veins, first into the auricle, and then through the mitral orifice into the ventricle. He regrets that he did not see the whole dissection, and that he had not an opportunity of tracing the course of the ball; but he saw the heart as it lay before it was opened, and felt the bullet at its apex.

A private in the 80th, a stout well-made man, was struck on the 14th of April, on the left shoulder by a musket-ball about an inch to the outside of the coracoid process. The course was then downwards and inwards into the thorax. The breathing was at once interfered with, being short and catching, with cough and bloody sputa; and there was considerable emphysema of the areolar tissue near the wound. He went on very well, though obviously getting thin and pale, and expressed himself as wonderfully easy. The chest in time contracted, while percussion became dull, and the respiratory sound could not be heard, while on the right side the sound became puerile.

On the 5th of May, he was removed to the dépôt at Amherst; there he gradually became thinner and weaker, till he was reduced almost to a skeleton; at the same time he continued to say he was "very well, considering." The side was now resonant, but there was no respiratory sound. Emphysema reappeared after being absent for several weeks. About the end of June he began to sink, and one evening he suddenly expired.

On dissection, the course of the ball could not be traced among the textures of the shoulder; but between the second and third ribs it passed obliquely through a narrow canal with cartilaginous sides, and then through the costal pleura; a large abscess occupied the cavity of the pleura, except superiorly, where there was air; the pleura was much thickened. The lung was very much condensed and pressed towards the heart; an opening in its pleural covering showed the continuation of the course of the ball, and this was further traced as far as the root of the lung, where the examiner failed to trace it further. In the lungs was found a piece of red cloth, and another of white cotton, closely appressed. On opening the pericardium, the apex of the heart appeared thickened, and a hard body was distinctly felt at that point. When the cavities were laid open, the musket-ball was found in the left ventricle, lying at the apex, with a thin covering of white lymph partly covering it.

No injury to the heart could be found, nor any evidence of diseased action. The right lung was healthy, as well as the other organs of the body. The heart, as found, was put in spirit, to be sent to Calcutta.

CASE XVII. *A ball found in right ventricle of heart, having fallen into it through the pulmonary artery.* Schmidt's Jahrbuch—British and Foreign Med.-Chir. Review, 1852.

The subject of this observation, while standing two or three paces off, was struck from behind on the left side of the thorax by a ball, which had rebounded at a sharp angle from a beam. He died in twenty minutes. The middle of the left shoulder-blade and sixth rib had been grazed, as well as the posterior lobe of the left lung—the left branch of the pulmonary artery being also wounded. A large quantity of blood was effused into the left pleura.

No ball could be found until the pericardium and heart were opened—both being quite uninjured. It was now found, quite flattened, in the right ventricle. The coats of the pulmonary artery immediately at the division of the trunk, were penetrated, and the ball had fallen, by its own weight, through the trunk of the pulmonary artery into the ventricle.

CASE XVIII. *Gunshot wound in the heart; the ball found in the right ventricle, resting upon the septum medium.* Reported by Dr. Latour, chief physician to the Duc de Berg.

A soldier having been shot in the chest, the hemorrhage was so great that his life was despaired of. By great care the blood commenced to flow with less force on the third day; his strength gradually improved; suppuration succeeded to hemorrhage; and several portions of a fractured rib were extracted. At the end of three months the wound cicatrized, and the patient experienced no other inconvenience than frequent palpitations of the heart, which tormented him during three years.

He died of a disease foreign to palpitations, six years after this wound. M. Marission, surgeon in chief of the hospital of Orleans, France, examined the body. A cicatrix marked the track of the ball, which was found confined in the right ventricle of the heart, near its point, resting upon the septum medium.

CASE XIX. *Gunshot wound of the heart; ball lodged in the septum between the ventricles without symptoms indicating its presence.*

This is the recent case of the prize-fighter, Poole, of New York City. He was shot with a revolver, and had so far recovered from his wounds that he was anxious to renew the contest with his antagonist, Baker, on the fourth day afterwards. The post-mortem appearances of the case were exhibited at the New York Pathological Society, March, 1855, by Dr. Finnell, and published in the *New Jersey Medical Reporter*, June, 1855.

Dr. Finnell next presented a portion of the integument of the outer part of the thigh, pierced in two places by a pistol-ball. The particulars of the case have been fully commented upon by the daily papers. The wound was received on Sunday morning, between twelve and one o'clock. He died on Thursday week following.

A post-mortem examination was made by Dr. Finnell. He found two wounds on the surface of the body—one on the lower and outer portion of the thigh, the other in the chest. The one in the thigh had two openings about an inch apart, and measuring a quarter of an inch in diameter. It passed through just beneath the skin without touching the muscles. The ball in the chest entered the sternum just at its junction with the cartilage of the fifth rib, passing through the bone and pericardium into the substance of the heart, where it was found. On raising the breast-bone, and exposing the pericardium, it was found very much distended, measuring five inches in its transverse

diameter, and six in its vertical. It contained about thirty ounces of a sero-sanguineous fluid. The external surface of the heart was covered with fibrinous exudation, the recent product of inflammation. The heart was washed and laid aside with no suspicion that the ball was lodged in it until after nearly two hours' search in the cavity of the chest, and especially along the side of the spine. At last the heart was very carefully felt over, and the bullet was found imbedded in its muscular texture. On making an incision it was exposed. Its lodgement was in the septum between the ventricles, about an inch and a half from the apex of the heart, and a quarter of an inch from its surface. The muscular substance had united over the ball and healed so far that the point of entrance was obliterated. He lived for twelve days without any palpitation, or any fainting or syncope such as is usually experienced in a morbid condition of the heart. Its action was perfectly regular. There is no question but that, under favorable circumstances, he might have recovered, and experienced little, if any, inconvenience from the ball. Four or five days after he was shot, he was quite strong. He died from pericarditis. It is probable that, on Wednesday night, the effusion began to come on, and it rapidly increased. At 9 o'clock on Thursday morning it suddenly increased, and he sank immediately. The lungs were pale and cedematous. The liver, kidneys, stomach, and other organs, presented an unusually fine view of organs in a sound condition. The whole body was a most perfect specimen of fine muscular development; even to the ends of his toes the muscles were remarkably developed.

Dr. Detmold remarked that similar cases were not unknown. Baron Larrey records one instance of a man who received a wound in the thorax from a musket-ball; he went about laboring apparently under nothing serious; he suddenly died. The bullet was found free in the cavity of the left ventricle. Several other cases are mentioned by him.

Dr. Clark referred to two instances on the records of the Society, where the heart was pierced through by a sharp instrument, one patient living about thirty days, the other eleven days.

Dr. Markoe remembers one case living two days after receiving a stab in the heart; another lived six days, the instrument having passed through the left ventricle.

Dr. Church, in a *post-mortem*, once found a needle on one of the valves of the aorta.

Dr. Purple mentioned an instance, where the heart was transfixed entirely. The patient lived eleven days. Another case is recorded in a medical journal, edited by the late Dr. Drake, of Cincinnati, of a negro, who shot himself; he lived sixty-six days; *two* shot were found in the left ventricle, and *one* in the right auricle.

Dr. Jenkins mentioned an instance where a piece of ramrod, three inches long, entered the heart; the patient living twelve days.

Dr. Batchelder instanced a case, related by Sir Astley Cooper, of a soldier who received a bayonet wound, passing through the colon, stomach, and diaphragm, into the heart, and living nine hours.

CASE XX. *The left ventricle of the heart opened by a dagger; patient survived nine weeks.* By Dr. M. Marini. Med. Examiner, 1844.

A woman, 32 years of age, was stabbed with a dagger in the region of the heart, immediately fell, and lost a large quantity of blood. M. Marini, who saw her very shortly afterwards, found her just in life, covered with a cold clammy sweat, continually fainting, and with a wavering weak pulse. The wound was near the mamma, about two inches and a few lines from the edge

of the sternum, between the fourth and fifth ribs. It was judged that the pericardium at least was injured, and that the wound was mortal. She was, therefore, carried to the hospital, and nothing was done till next day, when, as she was still alive, she was more carefully examined, and as the surgeons agreed that the wound was simply superficial and injured no important part, little was done, excepting drawing blood from the arm, or applying a few leeches to keep down threatened inflammation. Several times, however, she was in imminent danger of death. The external wound cicatrized, and she was dismissed as perfectly cured, after having been in the hospital six weeks. Three weeks after this, when rising suddenly from her bed one morning, she fell down and instantly expired.

Post-mortem.—The external cicatrix was found solid and perfect. The condensed tissue, which filled the line of the original wound, could easily be traced between the fourth and fifth ribs into the interior of the chest. Half-a-pound of colorless serous fluid was found in the left pleura, and the upper lobe of the lung had contracted many firm recent adhesions. The part of the pericardium where it had been penetrated by the dagger was much thickened, and presented traces of acute inflammation. A large cyst, of a blackish-blue color, filled with partly fluid, partly coagulated blood, adhered by a large pedicle to the left side of the pericardium. The pericardium was filled with about two pounds of blood, partly fluid, partly clotted; the heart was atrophied, its coats thinned, and its cavities full of blood. Near its apex, *it was pierced with a rounded conical-shaped aperture, which communicated with the left ventricle.* The aperture, which was so large as to permit the introduction of an ordinary pair of forceps, was surrounded by a ring of soft whitish lymph, which appeared to have adhered to the pericardium at the point penetrated by the dagger, and to have prevented the further effusion of blood.

SECTION V.

WOUNDS OF THE LARGE BLOODVESSELS IN THE CHEST.

CASE I. *Wound of the aorta; patient lived a month after it, and then died, not from its effects.* By James Mercer Green, M.D., of Macon, Georgia. Southern Med. and Surg. Journal, 1855.

I—d, a consumptive, in a drunken rencontre, was stabbed by his opponent in the supra-sternal fossa, with a long narrow-bladed knife. The external wound was small, accompanied by no hemorrhage, and soon healed up. I—d died in something over a month afterwards, of his internal disease and of the irritation of several other cuts received in different parts of his body, and a post-mortem was made by Dr. J. B. Wiley, in presence of Drs. Baber, McGoldrick and Guyton. On elevating the sternum, attention was drawn to a hard round ball attached to the aorta, in front, at the beginning of the arch. Upon making a careful examination of this ball, it was found to be a spherical indurated coagulum, covering a wound in the aorta itself. The ball was indurated to such a degree as to resist with success all the pressure that could be made between the thumb and fingers of several of the party present, who tried to crush it. But the most surprising feature in the whole case is the fact that no attempt had been made to unite the wound, which was about one-third of an inch in length and in the longitudinal direction of the vessel. The edges were perfectly smooth and sharp. The contour of the vessel at this point was indented, forced inwards by the coagulum, and this may be an important element in understanding this extraordinary case. No mistake could have been made in reference to the

patulousness of the slit in the aorta, as its singularity immediately attracted the attention of all present, and it was repeatedly examined.

These particulars were received from Dr. J. B. Wiley, a very competent and reliable observer, and quite familiar with necroscopical examinations.

CASE II. *Spontaneous cure of a wound in the ascending arch of the aorta.* Lancet, 1837, vol. xxxiv.

The following remarkable case shows to what an extent the curative powers of nature may occasionally be carried :—

J. H., 32 years of age, a strong robust soldier of the Bavarian army, received in 1812, a stab of a knife, which penetrated the chest between the fifth and sixth ribs. The man fell to the earth without consciousness, and remained there for more than an hour exposed to extreme cold. In this situation he was discovered by Dr. Neil, of Bamberg, who, although the patient seemed on the point of death, thought it right to bring the edges of the wound together, and had the man conveyed to the hospital. At the expiration of two or three hours, the hemorrhage continuing abundantly, the man came to himself but could distinguish nothing; he was affected with an incurable amaurosis. After a few weeks the wound healed completely; the man now left the hospital, and to console himself for his infirmity gave himself up to drink, which at length, in 1813, brought on a fatal pneumonia.

On examining the body it was found that the wound traversed the lungs completely across, the entrance and exit of the knife being marked by cicatrices; at the level of one of the cicatrices a solution of continuity was discovered in the ascending aorta; it was about a quarter of a line in length, and closed with firm fibrin. The artery was now removed with caution, and divided internally, when a small cicatrix corresponding with the external lesion, was discovered in the inner parietes of the vessel, thus showing that the three coats of the artery had been divided by the instrument.

CASE III. *Rupture of the vena azygos, etc.; death.* Hennen's Surgery.

The same ball struck a soldier of the 30th regiment on the right breast, brushing along the pectoral muscles, but without raising the skin, or occasioning any fracture of the bones. He lay stunned for some minutes, and was then carried on a bearer to the general hospital. I had not an opportunity of seeing him that night; but the next evening I called at the "Hospicio," where I found him evidently dying; his face bloated, and of a purple hue; his eyes starting from their sockets, his respiration excessively rapid, and his pulse feeble and quick, almost beyond counting; in fact, he died thirty-six hours after the accident, with all the symptoms of suffocation. On examining the body, the vena azygos was found ruptured, and also the intercostal artery of the fourth rib of the injured side; and two pounds of blood were extravasated in the cavity of the thorax.

CHAPTER VI.

THE ABDOMEN.

SECTION I.

SWALLOWING INDIGESTIBLE SUBSTANCES.

ON the subject of swallowing indigestible substances, we have many curious facts. We have examples of individuals eating dirt, cinders, insects, hair, candles, paper, etc., etc. Others have preferred a more solid diet, and have gulped down glass, stones, balls, nails, etc., etc. An Italian, Borelli, mentions an instance of a man who took the expensive repast of a hundred louis-d'ors at a single meal; and in 1837, a criminal sentenced to three years' imprisonment in the House of Correction, in London, under the apprehension that his money would be taken from him, swallowed seven half-crowns. Dr. Good, in his classical work on the study of medicine, says, the most common evidence of depraved taste is an appetite for knives, and hence we have numerous cases of knife-swallowers; nearly every country furnishing its own champion in this trade. He gives an instance of one of these performers, Cummings by name, and by craft a sailor, who lived ten years after his first experiments in knife-swallowing, and followed the practice the whole of that period. Being a Yankee, as he is ever bound to do, he excelled all others in the art of attempting to digest cold steel. He commenced, as a prudent man should, with buttons and musket-balls; then advanced to billiard-balls; and finally swallowed fourteen knives in the course of one day. This was on the 22d of June, 1822, and unfortunately proved too much for our enterprising countryman, for he died from the effects of this repast on the 25th August, six weeks after this feat.

A man entered Guy's hospital in 1809, under Drs. Babington and Currie. He complained of dreadful pain in the epigastric region, where an unnatural hardness could be easily felt. He was now greatly reduced, could not digest his food, and his alvine discharges had a strong ferruginous color. Before his death, some portions of knives could be reached with the finger in the rectum. The post-mortem examination exhibited pieces of the horn and iron of the knives in the stomach; one of the latter had pierced the colon and entered the abdominal cavity; other pieces were found across the rectum, and there were fixed in the muscles of the internal surface of the pelvis.

CASE I. *Pins swallowed.* Lancet, 1851.

It is now many years since a case occurred in which twenty, or perhaps thirty pins, were removed at different times from different parts of the body and limbs of a servant girl. The history is as follows: She was engaged in hanging out clothes, having, as is often the case with girls, her mouth full of pins. Some young female visitors in a frolic stole quietly behind her, and gave her a smart slap between the shoulders. The girl's head being raised

and thrown back at the time, she gave a sudden start, and down went the pins. Her sufferings were very great, and long-continued; and she became subject to fits, though she lived many years, and eventually died in childhood; having had, however, in the interval, pins extracted successively from her arms and legs, and from the breasts.

In a post-mortem examination of a male subject, a needle was found imbedded in the substance of the liver.

It has been said that all foreign bodies have a tendency to seek the surface, progressing on, as it were, by what Abernethy (borrowing the term, I believe, from John Hunter) was wont to call "continuous absorption." I do not quote such cases as instructing us in the practical management, but as showing the wonderful provisions of nature. Had the second patient lived, the needle might, not improbably, have travelled eventually to the surface of the body.

I will beg to mention, as concisely as I can, another curious case, which, though not exactly classable with the above, is in its way of some interest. A man, who had complained of uneasy sensations about the lower part of the bowels, found one day a portion of worsted thread hanging down from the anus. On this being slightly drawn down, some pain and pricking sensations were felt, and eventually, to shorten the narrative, by a little manipulation he was delivered of a large stocking darning-needle, round which was wound a portion of worsted, with one end of it somewhat loose, and which had protruded at the anus. Now, had not this needle been coated, so to speak, with the worsted wound around it, the bulk of which prevented its puncturing and passing through the sides of the intestines, it may be assumed that it would have made its way to the skin—that being found impracticable, nature (if we may so speak) very kindly steered it through the entire tortuous channel of the convolutions of the intestines till it arrived at the exit.

I will just say, that the man recollected having had his throat pricked by something while eating his breakfast some time before, and his wife concluded that in making the household bread, the needle might have fallen from her handkerchief into the dough.

CASE II. *Pins and needles swallowed.* By J. A. Smith, M. R. C. S. Lancet, 1851.

In 1834, or thereabouts, being then in practice at Manchester, I was requested to visit the servant-maid of Mrs. Barnes, mother of Thomas Barnes, Esq., cotton-spinner, Ardwickgreen, reported to be suffering from a "stitch in the side." I thought her symptoms indicated neither inflammation nor spasm; anxious to examine the seat of pain, in the presence of her mistress, I placed her undressed on a sofa. I fancied I felt some hard body midway between the crest of the ilium and the lowest rib; and though seemingly deeply imbedded (guided by the two cases I am about to relate, and the history of a third), I cut down with a pocket scalpel, again and again enlarging the incision, till feeling the knife grate, with a pair of dissecting forceps I seized the head or eye of a common darning stocking-needle, nearly three inches long, and, to the astonishment of her mistress, withdrew it safely. The girl admitted she had been in the habit of swallowing pins and needles.

A few months previously, a poor, emaciated woman came to my surgery, from whose arm I cut out a common needle. It lay in close proximity to the trunk of the brachial artery, and was distinctly to be felt.

My esteemed friend, the late Mr. W. N. S. Cooper, surgeon, of Manchester, showed me a case where a needle, accidentally swallowed, presented under the skin of the breast, and, months afterwards, near the elbow-joint, with very

sudden agony and distinctness; the attempt to extract it was not suffered to be made.

Any of the surgeons in Nottingham will recollect the history of a woman, admitted a few years ago into the Nottingham Infirmary, from various parts of whose body great numbers of pins were either cut out or formed small subcutaneous abscesses. I do not know the particulars, but well remember seeing it recorded in Blackner's *History of Nottingham*. Perhaps some of the medical staff of the hospital will point to a more professional record of the case.

CASE III. *Swallowing pins in immense numbers; one pound nine ounces found in the stomach and duodenum.* By John Marshall, Esq., of Wallingford, England. *Lancet*, 1852.

A tradesman's wife, aged forty-one at the time of her death, who had borne six children—the last in 1844—a tall, well-formed woman, had suffered from the following symptoms: In December, 1842, fourteen days after the birth of her fifth child, she vomited a washhand-basinful of blood. For forty-eight hours subsequently she was unconscious, the pupils were dilated, and the pulse hardly to be felt. She recovered slowly, and her complexion always retained a sallow hue afterwards. The last labor, in 1844, was unattended by any similar or other ailment, and she recovered quickly. In the autumn of 1845, she suffered from pain at the epigastrium and in the left groin, accompanied with frequent vomiting. A hard tumor, size and shape of an ordinary placenta, was found in the left groin, movable in a transverse direction when the patient turned from side to side. This had been felt by the patient for many months; when it moved, it caused nausea, but no pain, nor was it tender to the touch. She had pain between the shoulders, shooting into the left breast, and suffered much from flatulence. The catamenia had not appeared for three months, and she thought she was pregnant. The bowels were constipated, the vomiting continued, with occasional mixture of blood in the matters thrown up; she became much emaciated, and so feeble that her death was expected. She recovered, however, after taking nothing but small quantities of brandy at short intervals for two days. She gradually regained strength, and looked almost as well as usual. During the five following years, she continued in tolerable health; the pain and occasional sickness, constipated state of bowels, and occasional œdema of face and ankles, were the principal indications of impaired health. The catamenia had never returned since 1845. In October, 1850, after a return of the old symptoms of incessant vomiting, etc., she sank after an illness of three weeks.

Post-mortem examination, eighteen hours after death.—The stomach was found reaching, at its pyloric end, the arch of the pubes, its form resembling that of a champagne-bottle; the duodenum lay partly under the sigmoid flexure of the colon; the pancreas was also drawn out of its natural position; the liver was large and pale, and the gall-bladder full of bile. Nothing remarkable was observed in the other organs of the abdomen and pelvis, except that the cæcum and colon were small, and had lost the character of large intestines. No ulceration was to be found throughout the whole length of the intestinal canal, nor any adhesion or other sign of peritoneal inflammation. The stomach contained in its lower half, nine ounces of pins of a purple-black color, not corroded, all bent or broken, many very pointed. The coats of the stomach were much thickened; the duodenum contained a mass of pins very tightly packed, of various shapes, similar to those found in the stomach, and wholly obstructing the tube. Their weight was about a pound. The husband of the patient had never seen her put pins in her mouth, but her son said that he had observed his mother biting pins, and believed that she

swallowed them ; and stated, moreover, that he had occasionally taunted her with the fact, when she corrected him. It appeared that her appetite was always capricious, occasionally very keen ; and her sister informed the author that when a child she was in the habit of eating starch and slate-pencil, and that she had seen her biting pins. At seventeen years of age, she had vomited blood, and was ill for some time afterwards.

CASE IV. *Extraordinary case of pin-swallowing.* Lancet, 1854.

In September last, a girl at Vienna, who labored under an aberration of intellect, attempted to destroy her life by swallowing a quantity of pins. The first dose consisted of seventy, which she took one after the other, each pin being enveloped in a wafer ; but in consequence of their smallness they passed away without doing any mischief. Subsequently she again took to swallowing pins of a larger size, some of them two inches long. She was then seized with such severe illness, that she was taken to the hospital of the town, when it was instantly detected what she was suffering from, and she was placed under a course of treatment, which had the effect of dislodging the whole of the pins in succession from the bowels. There were no less than 242 pins passed, all of them of a black color. The girl is now in a fair way of recovery.

CASE V. *Attempt to destroy an infant by making it swallow ten pins, with the report of the trial, in which a case is mentioned of a young girl swallowing fourteen hundred pins ; etc.* London Med. Gazette—Med. Examiner, vol. ii.

A very curious medico-legal fact is narrated in the *Gazette des Tribunaux*, and the *Droit* of the 16th of November. A servant girl, of seventeen, named Rose Melanie Selter, was tried before the Court of Assize of the Seine, for attempting to kill a child, aged two months and a half, by making it swallow ten pins. The case alleged was as follows :—

The Sieur and Dame Fournereau have an only child, now about five months old.¹ It was suckled by its mother, and was in the finest health, when, on the 7th of last April, it was attacked with dyspnoea and fits of suffocation, which made its parents fear for its life. On the following days its sufferings continued, and it seemed as if there was something in the infant's stomach and throat which obstructed respiration. However, on the 10th of April the pains ceased, and the infant recovered its health.

The cause of the attack was unknown, until, on the morning of the 11th of April, Fournereau's wife found three pins in the child's stool, four more in the evening, and three the next morning ; making a sum total of ten pins that the child had swallowed. Fournereau and his wife attributed what had happened to the malice of the servant girl, and discharged her.

On their complaint, Selter was taken up, and confessed before the commissary of police that she had made the child swallow ten pins on the 7th and 8th of April ; and that she had done so in order to get herself discharged and sent home to her parents, who forced her to go to service. In the written statement, the prisoner still said that she had made the child swallow the pins, but asserted it was all done on one occasion ; and that she must have lost her reason to do such a thing, for she loved the child, and had no cause for animosity against her master and mistress. She also alleged that at certain periods she was worried by her blood to such a degree that she did not know what she was about.

It seems that three or four years ago the prisoner had some symptoms of insanity, consisting of a nervous agitation, which made her run about the

¹ The indictment having been drawn up in June, as we suppose.—*Translator.*

country without any object, and compelled the *Sieur Maugin* to send her home to her father.

A physician was ordered to visit her in prison, and make his observations upon her for a certain time. He reported that no symptoms of derangement had appeared since her imprisonment. *Dr. Ollivier*, of Angers, being consulted by the court as to the seriousness of the attempt, medically considered, replied as follows:—

“The introduction of the pins into the child’s body did not produce any serious symptom; this is not surprising, for there are numerous examples of the same kind on record. Thus there is a case of a young girl who had swallowed pins in her childhood, and did not get rid of them till fifteen years afterwards. There are pains, indeed, and a feeling of suffocation at the moment of their passing into the *œsophagus*, and that is all. A young girl who was insane, a toy and doll maker by trade, and who also had pins about her, swallowed fourteen hundred of them, which were all found in her body; her muscles were as thickly set with them as so many pincushions. Nevertheless, her death was quite independent of this occurrence. Hence, the rule is, that bad symptoms are not produced, but there is a considerable number of exceptions, where abscesses in the liver, of the abdomen, and death itself, were caused by pins.

“The story which the prisoner first told me is possible, and the pins may all have been given to the child at once. As to whether they were swallowed head or point foremost, I cannot answer that question; for though they may have passed with the head foremost, they need not have been introduced in the same way, since they may have been reversed in their passage.

“It was next my duty to examine the state of the prisoner, and to do this effectually, I inquired into her previous history. After having lived in Paris from her earliest years, she passed a year and half in her native district. The official papers contain the notes and descriptions of persons who saw her during that period. I was struck with the contrast between the physical development of the girl and her slender intelligence. She is sixteen and a half, and you would have taken her to be twenty; but though physically developed, her conduct is that of a child. I have observed alternations of good and bad health since her confinement in prison. She suffers from headache very frequently; she feels very drowsy, and it is particularly at the catamenial periods that she is in this state.

“*Selter* told me at first that it was at one of these periods that she committed the crime of which she is accused. It was my duty to draw conclusions from all these facts, and I must say that nothing, either in the conduct or the answers of the prisoner, showed any disorder of the intellectual faculties. Nevertheless, after having maturely considered the interesting medico-legal questions which arise in this case, I declare, that when I connect together the habits of the prisoner’s childhood with what is extraordinary and motiveless in the act of which she is accused, I have my doubts. (A sensation in court.) This uncertainty is increased when we think of the temporary disturbance which certain periods that I have just mentioned cause in woman. It is my duty to tell you, that I have my doubts. I do not now oppose what I said in my report, but I am less decided than I was.”

The Advocate-General.—“There is a fact that you do not know, because it has only come out in the proceedings. The prisoner did not show the least emotion during the whole course of the child’s illness. What deduction can you draw from this?”

Dr. Ollivier.—“To a certain extent this would seem to confirm what I have just said. If she had had sensibility, as every one else has, she would

not have been able to see the child's sufferings without betraying herself by her uneasiness. It may be possible that she acted without intention, mechanically, and by one of those instinctive impulses of which we may each find examples by examining ourselves."

After a discussion between the Advocate-general and Dr. Ollivier on the state of the prisoner's intellect, and hearing some witnesses for the defence, M. Plougoum, the Advocate-general, rose, and gave up the prosecution.

After a short deliberation, the jury brought in a verdict of not guilty, and the President declared the prisoner acquitted. The girl seemed unconscious of what was going on; she heard her acquittal without betraying the least emotion, and did not think of leaving the court till told to do so by the gendarmes.

The preceding facts sufficiently prove that there was no malice prepense in the prisoner when she made the child swallow the pins, and that the act can in strictness be called nothing but folly or madness; and the judgment of the court was founded on this supposition.

The following is the medico-legal question arising from this case. Dupuytren expresses himself on this subject as follows:—

"I have seen at the Hôtel Dieu, a considerable number of women and children afflicted with this mania, and suffering under the same symptoms. The most remarkable of these cases was one of a woman, who, in consequence of swallowing an incredible number of pins and needles, had become frightfully thin, and was obliged to keep quite still in bed, from the acute pain which was caused, on the slightest motion, by the needles and pins, which made their way out from every part of her skin. I opened more than a hundred collections of pus in this woman, at the bottom of which I always found one or two needles or pins. On the surface of this unfortunate person's body there were always fifty or sixty abscesses or tumors caused by the presence of as many of these foreign bodies; which, when added to the number of those which nature was not yet strong enough to drive towards the skin, formed a fearful sum total. It is easy to see that if the presence of a single one of these foreign bodies makes motion difficult and painful, so great a number must bring on general debility, continued fever, and fatal marasmus: and, in fact, the woman of whom I am speaking died in a hectic state. When her body was opened, several hundred pins and needles were found spread throughout the various organs, the limbs, the areolar tissue, and the muscles; in short, in every part of the body." (Dupuytren, *Blessures par armes de guerre*, t. 1er, p. 82.)

We see that Dupuytren is far from thinking that a great number of needles or pins can be swallowed harmlessly. Yet there are facts which prove, as Dr. Ollivier says, that these pointed bodies may pass from the alimentary canal into the neighboring organs by gently penetrating the tissues, and at length creeping towards the surface of the body without causing any serious symptoms. Every one knows, for instance, the history of the girl at Copenhagen, who had a passion for swallowing needles, and in whom a number of points were observed in the skin, giving exit to these instruments.

In other instances these bodies become enveloped in mucus, slip into the bowels, and make their way out by the anus, as in the case of Fournereau.

"Foreign bodies," says Boyer, "when long, thin, and pointed, such as needles and pins, sometime traverse the stomach or intestines, and reach the liver or mesentery. But most frequently they pass without causing pain or inflammation, and appear under the skin in parts more or less distant from the alimentary passages. Lastly, foreign bodies have been known to traverse the intestines, enter the bladder, and pass out of the urethra with the urine."

CASE VI. *Three hundred and ninety-five needles extracted from a patient.* By Dr. Otto, of Copenhagen. *Lancet*, 1825, vols. vii., viii.

Rachel Hertz had, up to her fourteenth year, lived in the enjoyment of pretty good health; she was of a delicate constitution, active, and cheerful. On the 16th of August, 1807, she came under the care of Professor Herholdt for a violent colic, which soon yielded to the employment of antiphlogistic medicines. She continued well up to the 24th of November of the same year, at which time she was seized with erysipelas of the face, accompanied with severe fever, which subsided in about the usual time, but returned again very frequently during the three following months.

In March, 1808, the patient found herself very weak, and became gradually emaciated; her countenance was pale and haggard, and many symptoms appeared which partook of an hysterical nature, but which would not yield to the ordinary anti-hysterical medicines.

From March, 1808, to the end of May, 1809, a period of fourteen months, she suffered from very distressing paroxysms of hysteria, sometimes accompanied by fainting, so severe that many persons thought she was dead. At other times she was seized with violent epileptic attacks, and sometimes with high delirium, drowsiness and hiccough. These symptoms continued from March to May, 1808, and during the fits of delirium she repeated long passages from the writings of Göthe, Schiller, Shakspeare, and Oehlenschläger; she delivered them with a loud voice and with as correct an emphasis as any one in health could do; and although at such times her eyes were closed, she accompanied her declamations with suitable gesticulations. The delirium went on increasing, and at last reached to a fearful height; she gnashed with her teeth, bit the people about her, and kicked and fought with great violence, so as to disturb, not only her own household, but the whole neighborhood with her ravings; sometimes she lay in a soporose state, deprived of all sense and power of motion, appearing scarcely to breathe, and would again suddenly start up and utter wild and piercing shrieks.

* * * * *

We omit some of the tedious narrative of the case.

In January, 1819, violent colic pains seized the patient, attended with considerable fever and purging of blood, and so low was she reduced, that no one who saw her thought that she could recover.

On the 2d of February, a tumor, which had appeared just beneath the umbilicus was examined, and was found to consist of three principal divisions, or lobes; sedative and emollient cataplasms were applied to this, but the pain was not assuaged; the patient appeared to be gradually sinking. She remained very low until the 12th of February, when Professor Herholdt considered it necessary to make a deep incision into the swelling, in order to let out any pus that might have been contained in it. No matter came out, and but very little blood; he then examined the wound with a sound, and felt it strike against something, which communicated the sensation to the hand of its being a metallic body; with the forceps he laid hold of it, and, to his great surprise, drew out a *needle*. All the symptoms gradually subsided, but soon after returned again with a fresh vomiting of blood. The abdomen was again examined, and another tumor was discovered in the left lumbar region, the slightest touch of which occasioned great pain.

On the 15th of February, an incision was made into it, and a black oxydized needle extracted from its centre. From this time, that is to say, from the 12th of February, 1819, to the 10th of August, 1820, a period of eighteen months, the patient experienced pains in different parts of the body, supposed to be occasioned by needles deeply seated, and during that time

two hundred and ninety-five needles were at different intervals extracted, namely—

From the left breast	22
“ between the breasts	14
“ the epigastric region	41
“ the left hypochondriac region	19
“ right hypochondriac region	20
“ the navel	31
“ the left lumbar region	39
“ the right lumbar region	17
“ the hypogastric region	14
“ right iliac region	23
“ left iliac region	27
“ the left thigh	3
“ the right thigh	23
“ between the shoulders	1
“ beneath the left shoulder	1
Total	295

Many of them were broken, or corroded, some being without points, others without eyes; some were large and black, like the pins used for dressing the hair, and others were small. The brass needles retained their proper polish, but all the others were black and oxydized. They made their appearance at different intervals; sometimes days, weeks, and months intervening between the times of the extraction. The patient, during the greatest part of this time, was so low and weak that she was obliged to keep to her bed, and although she did not experience much pain when the needles were deep, yet as soon as they approached the surface her sufferings were very great. Professor Herholdt was often urged to cut into the skin to seek for the needles, and thus to afford some relief to the patient, but such attempts were without success; it was in vain that he sought for them; he was obliged to wait several days, until the needles appeared in the wound, or could be distinguished by the touch. Only once did he attempt to draw out a needle with his fingers from the breast without making an incision, but the needle broke and he was obliged to make two openings to get it out. On four occasions only did any bleeding follow the extraction, but no suppuration attended a single case. The patient bore her sufferings with wonderful fortitude until January, 1822, when her mother was seized with an apoplectic fit, which had such an effect upon her mind that she became paralytic, first in her right arm, then in her left, and afterwards in her lower extremities also; she lost the use of speech, so that neither by words nor by signs could she direct the attention of the bystanders to the places at which the needles gave her pain. In about five days the voice returned, and up to the 19th of August, 1820, no more needles were discharged; the pain in the bowels, and other symptoms, had also ceased. By the employment of antispasmodic medicines, cold bath, blisters, and so on, the patient gradually became better, and on the 8th of March, 1821, she appeared to be quite relieved; so much improved was she that Professor Herholdt considered her quite well. Thus she remained up to this time, when a new series of sufferings commenced; a painful tumor showed itself in the right armpit, which increased to a great size, and was so very painful that her life was considered in great danger. This swelling also contained needles, and so great was the number, that from the 26th of May to the 10th of July, 1822, *one hundred* were extracted, making with the two hundred and ninety-five before mentioned, the enormous number of *three hundred and ninety-five!!!*

The patient is marked with scars in various parts of the body, and is at

present in Frederick's Hospital, at Copenhagen, where she has been visited by Dr. Otto, and thirty other persons, at different times, who are willing to verify the assertions herein contained respecting her. The patient's ischury, in the year 1822, left her, and she was, instead of it, attacked by diabetes insipidus, which proceeded to a very great length; her bowels remained obstinately costive, with great emaciation and debility, but hopes are still entertained of her recovery. During this long illness, or rather toward the latter part of it, the patient amused herself by learning Latin, and wrote an account of the principal changes that had occurred in the history of her case.

Such is the detail of this very astonishing case; the principal defects of it are the want of a more minute specification of dates, and the too frequent occurrence of long intervals in the notices of the state of the patient. Another difficulty, which has not been gotten over, is to account for the introduction of the needles into the body, as they could not have grown there. It is supposed, by Professor Herholdt and Dr. Otto, that she must have swallowed the needles during her delirious fits.

CASES VII. and VIII. *Pins taken from the body.* American Journal Med. Sciences, 1837.

Two interesting examples of this are related in a recent number of the *London Medical and Surgical Journal* (March 18th, 1837). The first case was that of a woman who had a packet of pins in her left bosom, and was quietly walking along, when a drunken man rushed against her with such force as to drive the contents of the package into her left bosom; a good deal of hemorrhage immediately set in; a professional gentleman removed a few of the pins, but was obliged to leave the greater quantity in the organ they had entered so deeply. In a few months after she was admitted into the hospital. A cicatrix existed upon the surface of the left mamma, at the point of entrance, also the cicatrices of three or four incisions upon the upper part of the arm, and as many more upon the left side of the trunk, and upon the upper and posterior part of the left lower extremity. During her stay in the hospital, whenever a pin was about coming to the surface, a slight degree of redness of the integuments always preceded, and pain was felt in the spot, particularly upon handling it; with the greatest certainty of finding a pin, an incision would then be made, and the pin found four or five lines from the surface, which was readily removed with a forceps. Before she left the hospital as many as twenty pins had been, altogether, removed, and that which was last removed invariably made its appearance at a greater distance from the seat of the injury than the one which preceded it. Thus the last pins removed were from the dorsum of the left thumb, and the anterior part of the left ankle. In their course they invariably followed the intermuscular areolar intervals, and confined their route to the left side of the body, never passing the median areolar boundary.

Pins swallowed.—In the other case the individual was pinning up some bed curtains previous to finishing them, and this operation requiring more hands than one pair, some of the servants volunteered their services, and amongst the rest a smart dapper footman. This gentleman's attention being more directed to the shape and figure of the principal, who was standing on a high stool with her mouth full of pins, than to any use he was present for, gently commenced paying his devoirs by giving a portion of her gluteus maximus (which was in the most inviting position for such an operation) a smart embrace between the finger and thumb of his right hand. She started, her foot slipped, her ankle was strained, but, what was of more serious consequence, she swallowed the pins! The poor girl suffered great pain and fright—a medical man was immediately sent for, who removed as many pins

as he could from the bag of the pharynx. She was admitted into hospital. Several pins in addition were brought away, and she left in about two months in the full conviction that at least two dozen pins were distributed in various parts of her body. For a year afterwards she was a constant visitor at the hospital, to have pins removed from various parts of her body. Unlike the first case, the pins followed no regular boundary, which is to be accounted for by their entering the bag of the pharynx in every direction.

CASE IX. *A pin passing from the appendix vermiformis into the bladder.* By Wm. D. Kingdon, M. D., of Exeter, England. Provincial Med. and Surg. Transactions—British and Foreign Med.-Chir. Review, 1842.

J. P., aged 7. In the early part of January, 1836, he awoke in the night-time, complaining of great difficulty of micturition, not being able to pass more than two or three drops of urine at a time. In this state he continued, suffering little pain, and that only from the retention of urine, for upwards of a week; when one morning, making greater efforts than usual, he perceived something of a whitish color moving about at the orifice of the urethra, and taking hold of it drew out a female worm (*ascaris lumbricoides*), which was followed by immediate relief from the foregoing symptoms. No further notice was taken of the circumstance until twelve or thirteen months afterwards, when the dysuria recurred and lasted nine or ten days, at the expiration of which term he had severe pain at the neck of the bladder, and said that there was something crawling in his penis; on examination, his mother discovered another worm, and drew it out as in the former instance, and with the same relief. In six months afterwards the same symptoms returned, but subsided in a few days on the evacuation of another worm. On the 4th of October, 1838, he complained of pain in the perineum and at the extremity of the penis, which continued night and day for more than a week, when it entirely subsided on the passage of another worm. He remained free from pain until January 11th, 1839, when the same distressing symptoms again recurred with aggravated severity, and lasted for two or three days: during this period he was unable to emit any urine, and it was for the first time thought necessary to call in the aid of a medical practitioner, who, on introducing the catheter, drew off a large quantity of water; in the course of the same afternoon a worm crept from the urethra, and, as before, the little sufferer experienced immediate relief. The pain, however, recurred much more frequently, and the urine was obliged to be drawn off repeatedly. The boy's appetite began to fail, and he lost flesh rapidly. Various professional gentlemen were consulted, but he received no benefit, and gradually became worse.

On the 8th of February, 1839, he came under Dr. Kingdon's care in the Exeter Dispensary. He then complained of occasional pain in the perineum and at the extremity of the penis; to make use of his own words, "Like as if there was a worm there, wanting to poke his way out." There was at times difficulty in passing his urine, but not requiring the use of the catheter. Under the use of sedative medicines, he was much relieved, but on the 12th of April, the symptoms returned with more severity than ever. The catheter was introduced, and afforded instant relief; shortly afterwards a worm made its way through the urethra, as on a previous occasion. Up to this period the boy had always voided his urine through the natural passage; but subsequently per anum. The pain now recurred two or three times in the course of the day, but was alleviated as soon as he could evacuate the urine from the bladder; the pain was likewise lessened on pressing the perineum with his hand; occasionally, too, a day would pass without any uneasy symptom. In

the beginning of May he was sounded, but no calculus was found. He became much worse, and frequently complained of the worm attempting to force its way out, and when in great pain a quantity of purulent matter oozed from the urethra. On the 20th of October he became blind; the pulse averaged 120; the countenance was anxious; the appetite for food very small, and that only for liquids. Very little urine was voided for the space of a fortnight, and his pain was more severe than ever; for this he took one-eighth of a grain of belladonna every five or six hours, and with considerable temporary relief. On the 24th his sight returned, and he became so much more free from pain that his medicines were omitted. On the 9th of November he was entirely free from pain, and any urine secreted was voided through the natural passage. Two worms were brought away by stool, and a third was found in bed the next morning. Still he became gradually weaker, and on the 15th died.

Examination of the body.—Emaciation. The whole intestinal canal discolored and presenting traces of inflammatory action, but the colon and rectum much more so than the small intestines; mesenteric glands enlarged; the appendix vermiformis, instead of occupying its natural situation, had descended into the pelvis, and about an inch from its termination was firmly united to the superior and lateral portion of the bladder, a little above the junction of the ureter with this organ; the bladder itself was smaller than natural, and firmly contracted at its lower part upon a hard substance, which, on laying open the cavity, proved to be a calculus of the triple phosphate form, measuring in length one inch and six-tenths, and in circumference two inches and nine-tenths; the parietes of the bladder were much thickened, and on laying them open about half an ounce of purulent matter escaped; the calculus was firmly pressed upon the internal orifice of the urethra, preventing almost entirely the flow of urine in that direction; the mucous coat of the bladder was ulcerated in two places, and on the mesial side of the opening of the right ureter, and a little above it, were two fistulous openings, the septum between the two being very slight, communicating with the interior of the appendix vermiformis; both ureters were much enlarged and inflamed, and both kidneys larger than natural, and so completely filled with pus that scarcely a healthy portion was discernible.

The calculus being carefully divided, displayed in its centre a large pin, which, as Dr. Kingdon justly remarks, satisfactorily accounts for the singular appearances above detailed. The poor boy must have swallowed the pin, which, after traversing the small intestines, formed a lodgement in the appendix vermiformis; here the irritation caused by it must have given rise to inflammation and adhesion of the process to the exterior of the bladder, and subsequent ulceration allowed the passage of the pin into the urinary bladder, where it formed the nucleus of the calculus discovered after death, though not detected during life. The fistulous communication with the bladder will likewise very readily account for the voiding of the urine from the anus, the natural orifice being closed by the calculus; and also for the passage of the worms through the urethra on the several occasions mentioned.

CASE X. Pin in the stomach producing convulsions. By T. S. Hopkins, M. D., of Waynesville, Georgia. *American Journal Med. Sciences*, 1856.

The following history of a case which recently occurred in my practice, may not be devoid of interest to the profession. A short time since I was called in haste to the child of Mr. J. C., aged two years, who was in convulsions. I reached the house at midnight, and received the following account of the case from the mother: Up to 10 o'clock A. M., the child was quite well;

from this time it became fretful, and, as the day advanced, screamed frequently, as though suffering acute pain. All efforts to quiet it were unavailing, and at about 4 P. M. it was seized with violent convulsions, and had four by sunset. The child had enjoyed excellent health from birth to the present time; had never been sick before. The convulsions had ceased before my arrival, and did not return. There were frequent efforts to vomit, during which a small quantity of thick glairy matter was occasionally brought up. These efforts to vomit were generally preceded by a loud cry indicative of severe suffering. The pulse, with the exception of a slight intermission, was in all respects natural. No symptom whatever existed indicative of cerebral lesion. The child was perfectly conscious, and endeavored to seize my watch as often as I presented it. Notwithstanding the absence of every symptom of that pathological condition upon which we would have supposed such a state of things to exist, there was perfect hemiplegia of the right side. The right arm and leg, allowed to fall from the lap of the mother, hung as motionless and helpless as though the appendages of a lifeless body.

Friction, counter-irritation, the warm bath, etc., were assiduously used; a dose of calomel was administered, followed at daylight by a dose of castor oil, which was immediately ejected from the stomach, bringing with it a pin, one inch and an eighth long, when the hemiplegia disappeared; and by 10 o'clock the child was playing about the house, apparently, and as time has proven, really as well as ever. The existence of the foreign body in the stomach is a sufficient explanation of the convulsions, but that the convulsions should be speedily followed by hemiplegia (the mental faculties remaining intact), and this vanish almost in a moment after the ejection of the foreign body from the stomach, leaving no trace of its existence, is what I acknowledge my inability to explain.

CASE XI. *The swallowing of a pin by a woman, and its extraction from the urethra fifteen months afterwards.* By Dr. Jesse F. Jones. Medical Repository, 1808.

Peggy, an ancient female domestic in my family, in the month of March, 1804, inadvertently swallowed a pin, which gave her some uneasiness, as it passed the œsophagus, but by swallowing a piece of bread after it, the pin passed into the stomach. Nothing more was thought of the circumstance until July or August, when she complained of a pain in her stomach and bowels, with nausea at times. Supposing that it proceeded from bilious obstruction, I administered an emetic, which operated well both upwards and downwards, but without relief; but she observed that the pain settled down lower in the abdomen, and lasted several months, when it gradually wore off until it quite ceased some time in the forepart of the winter; and she appeared to enjoy her usual health until June, 1805, at which time she was seized with a strangury, and severe pain in passing her urine, which was emitted only in small quantity, and mixed with a considerable portion of blood.

The symptoms growing more violent, demulcents, anodynes, and diuretics were used, with the antiphlogistic course, for the space of a week, when, to my surprise, I was informed that a hard substance presented itself at the orifice of the urethra, which was extracted with much pain and considerable effusion of blood, when the symptoms disappeared, and in a few days the patient recovered. On examining the substance, it was found to be the *pin* she had swallowed fifteen months before, covered with calculous matter to a considerable thickness, except about an eighth of an inch at the point, which was entirely naked. The head of the pin was covered with calculus to the size

of a small garden pea, which was quite smooth; below this was found a small neck, which increased in size, as it approached the point, to the bulk of a large currant, and very rough; at the largest circumference was a circular ridge jagged with sharp points, which was the cause of the effusion of blood. The pin presented with its head; it would have been impossible to have passed with the point foremost, as the rough jagged ridge would have presented.

CASE XII. The swallowing of a needle by a woman, and its extraction from the bladder, about two years afterwards, incrustated with a urinary deposit.
By Dr. John Sappington, of Missouri.

On the 15th of June, 1825, I was requested to ride twenty-five miles to see a negro girl, about fifteen years old, who had swallowed a very large sewing-needle, eighteen months or two years previous to that time, and who had complained of some uneasiness in the stomach and bowels since the time of swallowing it; but for much the greater part of the time had suffered excruciating pain in and about her privates.

Upon external examination I found no point to warrant an operation, and determined to examine per vaginam. On introducing my finger, I found a hard substance occupying a large portion of the pelvis. I then introduced a sound into the bladder, and, contrary to all expectation, met with a stone as large as a goose's egg.

She was emaciated in the extreme; but as she and her master were both desirous of having an operation performed at all hazards, I proceeded to operate by introducing a sharp-pointed curved bistoury, as high up into the bladder as I thought necessary and proper—the index finger of my left hand being up the vagina, so as to meet its point and to act as a guard; the one incision was sufficient.

I then introduced a pair of strong forceps, made that day, to break off the stone; but for some cause not then known to me, I found it impossible to pass the forceps up as high as I wished and expected; I, however, broke off about one-third part of it, and extracted it piecemeal, expecting that the balance would advance and occupy the place of that which had been removed. In that, however, I was disappointed; it was stationary. I then made several fruitless attempts to fasten the forceps upon the stone. I had pressure made on the lower part of the belly to assist in advancing it, and to keep the parts more steady, all to no purpose—for the forceps could not take hold of it.

I then passed my finger up into the bladder, and found that the remaining part of the stone was partially enveloped by, and firmly attached to the bladder, the separation of which required all the force I could exert with my finger, but ultimately succeeded by alternately skinning, as it were, the bladder with my finger, and then breaking down or scaling off the stone with the forceps.

Until I had removed the greater part of the stone, I thought it was a mistake about her having swallowed the needle at all; or that, if she had, it had by some means escaped unnoticed; but on finding the point near the centre of the stone, the eye of which might not have passed into the inner part of the bladder, all doubts were dispelled.

The needle was extracted, the balance of the stone removed, and the bladder carefully examined, so that no fragment of the stone should be left adhering to it; the parts were well syringed, and all extraneous particles removed.

The patient was then put to bed, and an anodyne draught given to her. On seeing her next morning, I found her quite cheerful. She had no pain or soreness, except when she moved in bed. Her recovery was rapid, and she enjoyed good health as long as the family remained in the neighborhood.

But, as is common after such an operation, she labored under an inability to retain her urine.

CASE XIII. *Swallowing a pin; its removal from the region over the descending colon about a year afterwards.* Medical News, 1846.

A maid-servant, while engaged in hanging up some curtains, accidentally swallowed a pin. Dr. Newmann, who was immediately sent for, found her pale from fright, and in a state of general tremor. She did not complain of pain in any part, and as she swallowed solids and liquids without difficulty, Dr. N. persuaded her that she had probably been deceived by her sensations. Her cheerfulness soon returned, and she enjoyed her usual health.

About a year afterwards, Dr. Newmann was suddenly sent for to remove the pin. On his arrival he ascertained that the female had, for some days, felt an itching pain in her left side, which she attributed to the presence of the pin. A small pustule was observed over the region of the descending colon, and this was the *pin* with the point projecting outwards. It was easily removed by the forceps, and was found to be perfectly clean. It had thus been in the alimentary canal for a year without giving rise to any unfavorable symptom.

CASE XIV. *Remarkable migration of a pin and needle, travelling side by side, from the stomach through the diaphragm, lung and pleura, among blood-vessels, muscles, etc., to the middle of the left arm.* By Napoleon B. Anderson, M. D., of Louisville, Kentucky. Western Journal of Med. and Surg., 1851.

On the 20th of April, 1849, Miss Catharine M——, æt. 19 years, in a fit of laughter, accidentally swallowed a large brass pin and a medium sized needle. No pain attended the passage of these bodies into the stomach, nor was any felt until after the expiration of about the third week, at which time a warm, pricking sensation was first felt in the cardiac orifice of the stomach, which position it maintained for the space of three months, when it gradually changed, and seated itself in the lower lobe of the left lung. In this situation it remained for some nine months, without any disturbance to the organ of respiration in which it was felt, with the exception of occasional cough and slight hæmoptysis. During this period, the pain gradually moved to the glenoid cavity of the scapula, and was experienced at the insertion of the deltoid muscle, in which situation considerable pain was the result of elevation or rotation of the arm. From this point it moved to the armpit, when the arm had to be carried horizontally, and no elevation, rotation, adduction, or abduction, could be performed without excruciating pain; the inner part of the arm turning very black, from the infiltration, I suppose, of blood into the surrounding parts. Pressure upon the parts produced no material change in coloration, nor was there any unusual amount of sensation or numbness in any part of the discolored portion, with the exception of the region in which these foreign bodies were situated. The arm remained in this condition, with no material changes, until December, 1850, when the pain and uneasiness moving from the armpit, towards the articulation of the ulna and radius with the humerus, settled in the belly of the biceps flexor muscle, forming there a dark spot the size of a half-dollar, which was very sensitive to the touch. An emollient poultice was applied for twenty-four hours, when fluctuation indicated the use of the knife. A quantity of bloody pus was discharged, and the *needle and pin* were extracted from two different apertures, about half an inch apart. The pin was dark, but the needle was bright, and had undergone no material change. Alteratives were used, and in ten days from the extraction of the bodies, the lady had perfect use of her arm, and has continued to have ever since.

During the period from the swallowing of these substances until their removal, the constitution was not disturbed in the slightest degree, except the cough and hæmoptysis spoken of; and this continued only as long as those articles were passing through the lung, after which the symptoms disappeared. The lady underwent no treatment during their migration from the mouth to the arm, with the exception of a purge when she first swallowed the articles, and anodyne embrocations afterwards. These pointed bodies appear to have travelled side by side over the entire route from the mouth to the point at which they were extracted, and must, in their course, have passed through the stomach, diaphragm, lung and pleura, and among muscles and bloodvessels, before reaching the parts from which they were extracted. The points of each article presented at the incision made, and must, I suppose, have thus passed the entire distance.

And thus they travelled, side by side, in cosy companionship, though one alone possessed the *head* and the other the *eye*. Curious indeed.

CASE XV. Hair and string in the alimentary canal, weighing eight or ten pounds. London Pathological Society. *Lancet*, 1851.

Sections of two large masses of hair and string, which had been removed from the stomach and duodenum of a young woman, after death. M. E. N., aged eighteen, came under Dr. Blakeley Brown's care, on the 7th of August, 1849. She had always been delicate, but more so during the last year. She appeared sickly and childish. The bowels acted irregularly, and were generally relaxed. The catamenia had appeared only once, about ten months before the above date. Appetite was variable, and she frequently vomited after meals. For several months she had been suffering from a tumor, apparently about the size of a large orange, situated in the epigastrie region, which projected slightly, but was not painful on gentle pressure; apparently solid, and very slightly movable. It had very gradually increased. She complained principally of general debility, and of the inconvenience from, and of the occasional pain about, the tumor. Under treatment she improved for about six weeks. On the 30th of September, she complained of much pain in the region of the tumor, which had come on after a severe attack of vomiting. This was relieved for a short time, but recurred the next day. Soon afterwards she became collapsed, and died.

Post-mortem examination.—The cavity of the peritoneum contained several ounces of purulent serum, and the general surface of the intestines afforded evidence of recent peritonitis; there were also some older adhesions. On opening the stomach and intestines, the masses of hair and string exhibited, were found. That from the stomach is moulded to the shape of that viscus, which was much dilated; it occupied the larger portion of the greater extremity, a narrowed part projecting into the pylorus. Very little solid food could have been taken latterly into the stomach, and little else than fluid would have passed by this mass into the duodenum. The mass consisted chiefly of long black hair and pieces of string rolled up and matted together with ingesta. It now measures, when dry, six inches in length, three and three-fourths in depth, and two and a half across; but was much larger and heavier when first removed. The second mass has taken the shape of the lower portion of the duodenum and commencement of the jejunum, which were considerably dilated. This mass consists of much less hair, but a very large proportion of string; it is fourteen inches in length, two and a half inches in depth, and two and a quarter broad in the thickest part. From the history of the case previous to the attendance of Dr. Blakeley Brown, it appears that she had been observed

to put hairs into her mouth when only three or four years of age, but that her habits had not attracted any particular attention of late.

CASE XVI. *Swallowing a silver spoon and its subsequent extraction by opening the intestinal canal.* By Dr. Samuel White, of Hudson, New York. Medical Repository, 1807.

May 22, 1806, George Macy, aged 26, became a patient of Dr. White for rheumatism, and while in a watchful delirium, swallowed, on the 7th of July, a full-sized teaspoon, with some fruit jelly.

The morning following he had some irregular sleep; continued through the 8th under a slight delirium, and complained of no uneasiness of the stomach. 9th. Continued the same until evening, when a spasmodic affection of the stomach alternated every fifteen minutes with a stupor; throwing himself, as often as the spasm returned, with great violence from one side to the other, for about two hours (while the spoon probably passed the pylorus), when he suddenly fell asleep, and rested well through the night, extending the diseased leg, the flexor tendons of which had been greatly contracted, especially through the last complaint. He now became rational, his fever formed a perfect crisis; he recounted the past transaction with extreme sensibility, and expressed great anxiety for relief.

I waited the efforts of nature, assisting her with oily and mucilaginous substances, which served to remove the constipated state of the bowels, and to guard against any corroding effect of the metal. His ulcers soon healed, and he continued to gain in health and strength until the 25th, when a cutting sensation, confirmed by pressure of the hand, when in a stooping position, led to a discovery of the situation of the spoon in one of the last circumvolutions of the intestinum ileum, near the line dividing the right iliac from the hypogastric region. It remained in this fixed position, with increased heat and irritation in the adjacent parts, till August 7th.

Fearing that any further delay might endanger success, and he being resolutely determined to suffer everything for relief, accompanied by the consulting physician, I had recourse to an operation as the dernier resort. I made an incision of about three inches, parallel with the epigastric artery, extending upwards to near a transverse line with the top of the os ilium—penetrating the inner edges of the obliquus externus descendens and obliquus internus ascendens, and transversalis abdominis—opened the peritoneum with a lancet, protruded the lower turn of the intestine containing the handle of the spoon, with my forefinger; pierced the intestine with the lancet over the end of the handle, and extracted it in the same direction with the forceps. I then laid the divided edges of the intestine directly opposite, and secured them with the glover's stitch—dressing the external wound with strips of adhesive plaster and lint.

After this I made use of simple dressings to the wound; applied a liniment composed of camphorated oil, volatile spirits of ammonia and laudanum, equal parts, to the diseased joint and limb, which became more painful and contracted while laboring under the irritation of the spoon. Under this treatment, his wound healed by the first intention; his knee became almost free from pain, and with the use of mild preparations of bark, he was soon able to move on his crutches, and ride abroad.

CASE XVII. *Swallowing hair; prolonged sojourn of it in the gastrointestinal canal.* By Dr. Crawford. Lancet, 1852.

Dr. Thompson has alluded, in this journal, to the case of a girl who used to swallow her hair, and had lately vomited packets of it. The patient has,

since then, passed, per anum, a large mass of the same organic product; this circumstance induced us to inquire more minutely into the case, and we learned from the girl the following facts:—

She is a servant, twenty-three years of age, now pale and thin, but formerly ruddy and stout, and was admitted Nov. 16, 1851, under the care of Dr. Crawford, with very obstinate constipation. The patient began to menstruate at the age of twelve years, and at thirteen, while in a comfortable situation, contracted the habit of picking off her hair, biting, chewing, and at last swallowing it. She went on satisfying this depraved taste for four or five months, when being reprimanded, she gave it up, and has never resumed the custom since.

Soon after this, the patient began to feel a pain under the false ribs, on the left side, just over the spleen and the large extremity of the stomach. She was treated in various ways, and at different hospitals and dispensaries, during several years, for this pain, no one, nor herself, suspecting that the above-mentioned habit was the source of her malady. The general belief was, that she suffered from a tumor in the vicinity of the spleen; pain in that region, constipation of bowels, and wasting, being the principal symptoms.

At last, about a fortnight before admission, she was seized with fits of vomiting, and, among the rejected matters, a solid concretion about the size of a walnut, was noticed; but this attracted no attention, until a second and much larger one was likewise brought up in the hospital. The nature of the affection became now apparent, but the constipation was very obstinate, and went so far as to produce stercoraceous vomiting. No more hair was noticed after these symptoms abated, until Jan. 26, about nine weeks after admission, when a very large hairy concretion was discovered in the feces. It was of the size of the dilated rectum, measured five inches in length, and was of a deep black color. (The girl's hair is of a light tint.) The patient states that she felt this in the right iliac fossa, and she is now under the impression that more hair will be evacuated. The health has of late been rather weak, but the appetite is pretty good, and the intellect clear; but the patient complains of flatus, and of the bowels rolling in knots. This is another and very striking example of the difficulty of treating disease, when we do not know *every particular* of the history.

CASE XVIII. *Introduction of a stick or swab-handle, more than ten inches in length, into the stomach; its exit by an abscess; cure.* By Francisco G. Y. Garcia, of Daimiel. Translated for the Medical Examiner, 1855.

Mateo Sanchez de la Nieta, native of the town of Daimiel, aged between 45 and 50 years, contracted a syphilitic disease, which, after a time affected the fauces and posterior part of the mouth. His attending physician, a distinguished practitioner, directed that the parts should be cleansed several times daily, and for the purpose constructed a swab with which he made the first applications, but not being sufficiently long, the patient had it spliced until the stick was more than ten inches (*una tercia*) in length.

One afternoon in the month of September, he was alone in his house and complying with the directions of the practitioner; but the presence of the swab, the stimulus of the medicament, the contraction of the muscles of the pharynx, a spasmodic movement, the carelessness of the patient, or all conjoined, caused him to relinquish his grasp of the instrument, which remained in the back part of the mouth. While thus embarrassed, one of his daughters came in, who perceiving him in distress, and not able to answer questions, gave him water, which he asked for by signs, which, not being able to swallow, was returned by the mouth and nostrils, with suffocating effect: some persons in the vicinity seeing him, sought a physician; in the meantime, which

was not long, the stick descended the œsophagus, the upper extremity fixing itself between the *pomum Adami* and the anterior portion of the fork formed by the *sterno-cleido-mastoideus*, producing a salient angle on the left side, which the patient indicated to the bystanders. A suffocating condition recurring, caused him to abandon it, and with the movements it disappeared not only from sight but also from the touch of the practitioner, who arrived after the patient had recovered from the paroxysm which followed that state. They gave him some spoonfuls of an anti-spasmodic mixture, which he swallowed with less difficulty than the water given him by his daughter. He recovered his speech somewhat, and complained only of anguish and smarting in the throat, and towards the left side a little above and in front of the nipple of the same side, which gradually ceased, disappearing on the fourth day, the patient, physician, and friends being left in an unhopèd-for quiet.

Eight days subsequently, the patient felt, deep in the left side of the epigastric region, sharp pains, running towards the last false ribs, increasing every hour, accompanied with gastric irritation and febrile symptoms, which led the physician to suggest a resort to spiritual aid. On the following day (the 14th from the ingestion of the stick), the greater part of the gastro-peritoneal symptoms, which indicated great peril, abated, the patient remaining almost without fever from the 17th to the 20th. Under these circumstances, the practitioner proceeded to a minute examination of the patient, and ascertaining the existence of the stick in the cavity of the stomach, proposed to the patient the operation of *gastrotomy*, to which he objected his age, his severe suffering, his present comfortable condition, and finally that he would not submit, though it would cost him his life.

The practitioner forced unwillingly to yield to the entreaties of the patient, and abandon all operations, directed him to eat, assuring him his condition was not as flattering as he supposed. At the expiration of ten days (26th of the accident), the patient presented himself at the house of the physician, asking him to examine an *apostume*, as he called it, which had appeared far below the nipple of the left side. The next day it was opened by a crucial incision, and a large quantity of pus, both well formed and bloody, was discharged; with the evacuation the patient grew worse, but four days after the incision, having improved somewhat, and feeling himself much better, without waiting for the physician, he determined to remove the dressing and cleanse the wound; a female neighbor, who was present to assist him, saw with wonder what appeared to be the end of a black stick in the opening of the abscess; encouraged by the patient, she seized the foreign body and drew it, and they saw with astonishment four or five inches of the stick of the swab projecting.

In the midst of the conflict of the two, they thought of and sent for Dr. Povil, who came at once to the aid of his patient; he took the stick, and assisted by the exit of pus, contractile movements of the stomach and muscles of inspiration, and traction of the woman, brought it to the surface, in the *intercostal space formed between the third and fourth false ribs of the left side*, as far as the point where it was spliced; then he seized the stick at the splice, fearing that the thread which bound it might give way, in consequence of putrefaction, which he presumed might have occurred since its ingestion; but this fear vanished when the point of the splice passing through the intercostal space, the thread was found unaltered; the extraction was continued until the extremity of the stick, to which threads or a frayed rag were tied, reached the external wound, where it stuck, causing new and sharp pains in the stomach, which, although they subsided, were followed by great distress and a soporose state. Having recovered, the practitioner continued his exertions, and introduced his thumb into the wound, and by forcibly depressing the

inferior rib, succeeded in dislodging and extracting the entire swab just as it had entered the mouth 28 days before. It was followed by a flow of pus, considerable blood, and gastric juice through the wound, together with some partially digested alimentary substances which had been eaten in the morning.

Care was taken in dressing the wound to avoid the introduction of air into it. He was placed upon his back with head and shoulders elevated, ordered a strict diet, being allowed a few spoonfuls of acidulated water for drink. The stick was found to be of black poplar (*populus nigra*), and more than a *tercia* (a third of a Spanish yard) or about eleven inches in length. The patient passed an uncomfortable night, but slept at intervals in the early part of the next morning. On the fourth day from the removal of the stick, the wound was of a dark color, owing to the presence of some coagula of blood; these came away the next day with the poultice, and the wound assumed a healthy appearance, and was completely healed in 26 days from the removal of the stick, and 49 from its entrance by the mouth.

This case occurred at Daimiel in the month of September, 1832, and was well known among the people. The statement is from the patient before death, and from his children who witnessed it. In 1834, Sanchez had a light attack of cholera; but during the ten succeeding years he worked as gardener and laborer without suffering from any serious indisposition; he remained fat and healthy until May, 1844, when the writer began to practice in that town. He died in 1849 of an acute attack of pleuro-pneumonia. W. S. W. R.

CASE XIX. *Swallowing a set of artificial teeth, with the plate, and their discharge per anum.* By James Phillips, M. D., of Nashville. Illinois Western Lancet, 1855.

Having noticed a case reported by Dr. Mussey, of Cincinnati, in the Lancet for October, 1853, somewhat similar to the following, it occurred to the writer that this would be, *à fortiori*, the more interesting from the fact of the plate being larger and the teeth more numerous.

Mr. J. W. Y., of this county, on Saturday, in January, 1854, while at dinner, in the act of swallowing a piece of bread, accidentally disengaged and swallowed a heavy gold plate, having a clasp on the left side, fastened to the first bicuspid, with the right clasped to the cuspidatus of its corresponding side. *The plate supported a full set of heavy incisors for the upper jaw, four in number.* The patient living five miles in the country, concluded to try his hand at the practice. He says he felt somewhat trepidated at the time of the accident, but soon relieved his fears by a reflection that, as he believed, "nature had made a way for the getting out whatever could get in." He soon took a dose of purgative pills, which he happened to have at hand; they operated freely, but brought away no teeth. He then reasoned in the following manner, that so long as he continued to take purgatives the contents of the bowels would be liquid and thereby be but illy calculated to surround and carry along the foreign body. That the liquid feces would pass by the plate, leaving it entirely naked and free to be caught by the clasps in the convolutions and there remain, whereas had the feces been indurated the inequalities of the plate would be concealed in the mass and quietly be carried through the intestinal tract. He therefore took no more pills, but ate his accustomed food, and keeping at his usual avocation, that of a farmer, quietly awaited the result. On Tuesday morning, two days and eighteen hours from the date of the accident, he passed *the plate, per anum*, with but little pain, surrounded by and impacted in a mass of indurated feces, thus relieving him of all apprehension of further trouble.

The practical point to be deducted from the above would be for the patient

to use that kind of food that would make bulky solid feces; placing no reliance on the efficacy of medicines that increase the peristaltic action of the bowels. Preferring also an erect position of the body a part of the time, as required by out-door work, thereby alternating with the decubitus of night.

CASE XX. *Several metallic bodies (nails, iron hinge, buckle, pieces of hoops, knife, etc.) found in the stomach.* By Professor Harrison, in the Irish College of Surgeons. Pattison's Med. Register, 1835.

The person in whose stomach the substances in question were found was an old man of the name of Wall, whose body was sent to the anatomy school of the College for the purpose of dissection. "With the living particulars of this individual," says Dr. Harrison, "I am almost wholly unacquainted, and shall therefore only mention that he had been, as I am informed, confined in a lunatic asylum for many years; that his bodily health was in general, good; that his habits and propensities were so mischievous as to render him exceedingly troublesome; and that he had an uncontrollable desire to seize every hard substance, particularly pieces of iron, that came within his reach to taste and to secrete them. I am not aware, however, of any observation having been made, during his lifetime, of any ill effects having arisen from an indulgence in this feeling. In the course of the dissection sufficient morbid changes were discovered in the brain to account for death; on those, however, I shall not dwell at present, I merely wish to notice the appearances which were observed (at first accidentally) in the abdomen. When this cavity had been opened, the attention of those present was at once attracted to the peculiar dark tinge of all the small intestines, which were distended with fluid of the same color. The stomach, though nearly empty, appeared of inordinate size, its left portion extending nearly as low as the left ilium; its coats felt remarkably thick. The peritoneum was free from inflammation, and with the exception of the two circumstances already mentioned, there was no other abnormal appearance in the exterior of the alimentary canal. The liver was of the usual size and consistence; its color, however, particularly in the right lobe, was peculiarly dark, not the mere effect of sanguineous congestion, but it was of the same deep ferruginous hue already noticed as so strikingly seen through the intestinal tunics. There was no bile in the gall-bladder. The spleen, pancreas, kidneys, etc., all presented normal characters. On pressing and examining the stomach and intestines, several very hard and irregularly shaped bodies were distinctly felt; one of these was easily pushed with a slight force, which curiosity induced, through the arch of the colon, and was found to be a *piece of iron of four or five inches in length*. The stomach was then opened, and was found to contain a great quantity of dark mucous fluid, and several metallic substances, such as the rusty remains of *large nails, long pieces of thin iron like portions of iron hoops, a worn-down blade of a knife, a large iron buckle with a pewter tongue*, as that of a saddle stirrup, an *iron hinge of a box or door*, and several small pieces of metal too thin and worn to admit of their original use or form being in any way recognized. Four or five pieces, in the same state, were also found in different parts of the intestinal canal, in addition to that already mentioned in the colon."

Most of these substances, it appears, had undergone considerable corrosion or solution, as if in a weak acid; and the disintegrating process, it was observed, had taken place in one direction in decided preference to another, "so as to present a very distinctly fibrinous structure, as if the decomposition had proceeded more readily in the direction in which the metal had been drawn or beat, than in an opposite or transverse course." It was also remarkable, that while the iron rim of the buckle was nearly worked through

by the solvent agent in the stomach, the pewter tongue was unaffected, and presented its full form and size.

The muscular coat of the stomach was hypertrophied throughout; the cardiac orifice was unusually large, but the line of demarcation between the œsophagus and stomach was peculiarly distinct. The mucous surface of the left portion presented no appearance that could be considered very abnormal, excepting the great development of the submucous glands, which were nearly as conspicuous as those in the crop of some granivorous birds. But the pyloric portion of the stomach was much more changed; the aperture of the pylorus was dilated to such an extent as to leave no trace of the valve. "The rugæ of the mucous membrane in the pyloric third of the stomach were unusually prominent, being elevated into firm, thick, vascular masses, so as to give the appearance of granulated projections or fungous growths; there was, however, no abrasion or ulceration on their surface, nor any unhealthy secretion, as in malignant or fungoid diseases, which these appearances at first view resembled. On an accurate examination it was clearly ascertained that these soft vascular projections were merely excessive developments of the natural rugæ of the stomach. The whole of this surface was deeply tinged with the same ferruginous sediment as has been already noticed in the fluid contents of the alimentary canal, and which obviously consisted of particles derived from the gradual solution of the metallic bodies which were contained in the splenic end of the stomach. In a depression between some of the granulated elevations that have been alluded to, a small opening through the stomach was observed; around this the coats were thin and hard, resembling the cicatrized circumference of a small ulcer, caused, in all probability, at some remote period by some of those irritating substances in the use of which the individual had indulged. It did not appear, however, that any of the contents of the stomach had ever escaped through this opening.

"On submitting a portion of the colored fluid matter which was contained in the alimentary canal to a careful examination, the presence of iron was easily detected. This metal was found in abundance both in the precipitate or sediment which was collected from the intestinal fluid, as well as in solution in the latter. In the former it existed in the form of a sulphuret; in the latter it was combined with the muriatic and acetic acids."

CASE XXI. *Passage of a tinned fork through the alimentary canal.* By M. Velpeau. Provincial Med. and Surg. Journal—Med. News, 1849.

M. Velpeau communicated to the Academy of Medicine, in the meeting of the fifth of June, an extraordinary fact, the relation of which was placed in his hands by Dr. Chemin, of Saints, near Coulommiers, in France. It appears that a farmer, thirty-two years of age, accidentally swallowed a small veal bone on the 15th of May, 1847; as respiration and deglutition became immediately very painful, he thrust a tinned iron fork (eight inches long, and one inch broad by the stem and teeth) into his throat to push down the bone, or bring it up again. This contrivance gave rise, first, to nausea, and then to such efforts of vomiting, that he lost hold of the fork, which, after a few attempts at deglutition, glided into the stomach. The man, frightened at this occurrence, repaired to Paris, where he consulted M. Velpeau and another practitioner. These gentlemen told him not to be alarmed, and that the fork would probably find its way by the natural outlet without any operation being called for. Having returned home, he placed himself under the care of Dr. Chemin, who watched the case. The patient complained of great pain after taking food or drink; had much nausea and water-brash. The fork lay in the cardiac extremity of the stomach, the teeth turned to the left. There it remained for

a fortnight, and was then felt to glide towards the pylorus, where it stayed four months. During all this time, there were vomitings of black matter several times a day, and the mouth was continually filled with an aqueous fluid; pain very intense; epigastrium extremely tender; pulse normal; no appetite; food very badly borne, and drink giving great pain. The foreign body at last passed through the pylorus, and took thirteen months to proceed along the small intestines, when it stopped in the right iliac region on a level with the ileo-cæcal valve. The pains were sharp and intermittent during this period; walking, and moving about the trunk, caused pain and pricking. The patient could feel the fork with his hand in pressing on the abdomen; stools very painful. This foreign body, after five months' stay in the iliac region, began to dissolve. The patient then complained of colic, and the stools got black and brick-colored; costiveness; much gurgling; abdomen tympanitic. For the next eight months there were costiveness and diarrhœa intermittently; colic less violent, and stools blackish. The patient, of his own accord, took to drinking five or six quarts of light wine per diem, and swallowed in the morning an ounce of the spirit of aniseed, to get rid of flatulence. The appetite became at this period inordinate; five or six pounds of solid food a day hardly sufficed. The man resumed gradually his farming occupations, and recovered his strength. Towards the 10th of December, 1848, a very severe fit of colic came on, and the symptoms of sinking became very alarming. Two ounces of castor oil produced abundant stools, and the attack passed off. At last, on the 8th of February, 1849, twenty months after having swallowed the fork, the patient felt suddenly a very severe lumbar pain, a sort of shaking in the pelvis; weight in the anal region, and a desire to evacuate. The dejections were plentiful, and in them was found a large portion of the fork—namely, that part lying between the end and the teeth. The man is now quite well, and free from all pain. The treatment consisted of linseed tea, poultices, emollient enemata, hip-baths, and laxatives. A report is to be made to the Academy on this singular case, by Messrs. Laugier, Bricheteau, and Caventou.

CASE XXII. *A pair of suspenders, three rollers, a mass of straw, etc., found in the intestines.* By D. Hayes Agnew, M. D., of Philadelphia. Medical Examiner, 1853.

The following case I am induced to report from its very singular character: On examining the body of an individual who, I believe, labored under some mental alienation during life, my attention was attracted to an adhesion between the parietal and visceral layers of the peritoneum over the cæcum, upon the separation of which, a small opening was perceived through the walls of the intestine, disclosing a dark looking substance, which, upon examination, proved to be a large mass of straw, little less than an ordinary sized fist, and firmly impacted in all the space below the ileo-cæcal valve. Noticing the transverse colon very much distended, an incision was made into its cavity, where were found a pair of suspenders, three rollers, and a quantity of thread, interwoven with one another. The webbing, which evidently was his suspenders, exceeded one and a quarter inches in breadth, and must have been several feet in length, inasmuch as it extended through the ascending, the transverse, and a portion of the descending colon, and doubled in several places upon itself. The rollers were of ordinary muslin, over one inch in width and the same in diameter, but which must have been of greater size when swallowed, as they had, in their progress along the intestines, become unrolled, leaving long ends which were encased within layers of feculent matter. The peritonitis, which no doubt had been the principal cause of death, was not, however, produced by the escape of any intestinal matter into the serous cavity, no such

discharge having occurred. The opening into the cæcum only presented itself after the reflected layer of the peritoneum was separated therefrom. Had life been prolonged, it is highly probable that the ulceration would have extended through the walls of the abdomen, and the cæcal contents passed out by this artificial route.

CASE XXIII. *A four-pronged fork swallowed, and subsequently extracted from the thigh.* Translated for the New Orleans Med. and Surg. Journal, 1853.

The subject was a female named Catharine, æt. 57, the wife of a retired officer, dwelling in the commune of Haute Saone, of a robust constitution, of a nervo-bilious temperament; the mother of two healthy children.

At the age of about 35 years her menses ceased, when she manifested strong symptoms of suicidal monomania. She made several ineffectual efforts to destroy herself; but in this she was defeated. Finally, she attempted to swallow an iron fork; but this was extracted, after some considerable effort, by the family physician, M. Le Tellier, who reports the case. Several years subsequent to this strange freak, Madame C. again attempted to thrust a fork down her throat; but the physician being called, again succeeded in extracting it, to the great satisfaction of the patient. Eight months after this experiment, without any pains in the stomach and bowels, without any derangement of the digestive functions, Madame C. began to complain of intense pain in the left hip and thigh—pains which destroyed her rest and made it difficult to walk. Her medical attendant, seeing nothing externally, deemed hers a case of sciatic neuralgia. For four years Dr. Le Tellier heard nothing of his patient, when he was again summoned to her assistance. This was in 1852. He found the pains in the thigh intense; for two years she had remained in bed, unable to move herself; her pulse was small and feeble, scarcely perceptible; no appetite; extreme emaciation; little sleep; lower limbs infiltrated; colliquative discharges, with nocturnal fevers. On the superior and external part of the left thigh, considerable tumefaction existed, painful on pressure, particularly near the trochanter. Here the integuments were somewhat discolored. Emollient cataplasms were ordered to the painful spot, and Peruvian bark given internally to support the strength.

Madame C., who had now fully recovered her intellectual faculties, informed her medical attendant that all medication was useless; for, said she, "it is a fork in my thigh, and I shall continue to suffer until it is removed." The poultices were continued for one month, when the painful spot spontaneously opened, about four fingers beneath the trochanter major, and discharged a quantity of pus.

By probing and manipulations, her medical attendant discovered an iron fork, and with a pair of forceps extracted it at once. This then settled the question, and put all doubt to rest; Madame C. had actually swallowed a fork. She then detailed all the particulars: that on the second day after the second fork had been removed from her throat, she succeeded in swallowing the one which had just been removed from her thigh; that it had four prongs; that it caused no pain nor uneasiness either in her stomach or bowels.

The handle, as well as one of the prongs was nearly destroyed by oxydation; but in other respects it was well preserved. She continued to sink, and on the eighth day after the extraction of the fork, Mrs. C. perished.

A thorough autopsy, so much desired, was refused; the parts, however, from which the fork was taken, were laid open, and a number of purulent abscesses, mostly empty, were revealed around and below the trochanter major. Mr. Le Tellier, to whom, as already related, we are indebted for the

facts of the foregoing case, makes the following reflections on this extraordinary case:—

In the first place, says he, is it not extraordinary that a foreign body, of the nature of the one under notice, should sojourn for nine months in the digestive organs, without determining serious accidents, and without any disturbance of the economy, until by an admirable effort of nature, it makes its way down to the thigh, where it begins to excite pain, which persists for three years? How long, it may be asked, did the fork remain in the stomach? Was it during its sojourn in this organ, under the solvent action of the gastric juice, that a portion of it was broken down? After it escaped through the pylorus, is it probable that it perforated the small intestines at some one point, or did it traverse the entire alimentary tract, leap over the ileo-cæcal valve, and pierce the descending colon? Once out of the intestine, what course could it have taken to have lodged behind and near the trochanter major? What became of the handle of the instrument? Did it remain in the system; or rather, may we not suppose that by oxydation it was so reduced in size as to make its escape per anum?

Many of these questions might have been definitely settled, had it been possible to make a searching post-mortem examination. Altogether, the case is without a parallel in modern surgery.

CASE XXIV. *A boy swallowing a silk handkerchief.* Boston Med. and Surg. Journal, 1851.

In the Provincial Surgical and Medical Journal, is the report of a case of a boy, who actually *swallowed a silk handkerchief* nearly a foot square. On the third day it was dejected from the bowels, perfect in every respect, except a slight discoloration. Probably this is the first instance in which a human subject has been thoroughly *wiped out* with a silk handkerchief. It is said that the boy was subject to epileptic fits, and imbecile in his intellect, and although not cured, was not rendered any worse by this extraordinary operation.

CASE XXV. *An infant poisoned from swallowing percussion caps.* By T. W. Foster, M. D. of Keene, Kentucky. Medical Examiner, 1847.

Not long since I was called in great haste to attend an infant, æt. 14 months. Upon entering the room, I was informed by the parents that they had observed their child about two hours previous to my visit, playing with a box of percussion caps, and they supposed she had swallowed some of them, as signs of acute suffering were exhibited soon after.

The little patient appeared to be sinking very fast. The eyes had a hollow, glazed appearance; there was great heat in the epigastric region, and coldness of the extremities; there had been eight or nine discharges from the bowels in an hour, and her general aspect denoted approaching collapse. Before my arrival free emesis had been produced by some domestic remedy, yet I continued the vomiting by administering ipecac, and large draughts of warm water (of which the patient greedily drank), with the hope of discharging at least a portion of the offending matters. The discharges became so debilitating, however, that I threw up an injection of eight drops of laudanum, suspended in starch mucilage, and immediately afterwards gave a large dose of calcined magnesia. An alkaline purgative was selected for the purpose of neutralizing any acid which might be found in the stomach or intestines, and thus prevent any chemical change in the copper. In the course of an hour the child became perfectly composed, and fell into a pleasant slumber,

though it had previously suffered excruciating pain, attended with spasms. Dr. Spilman, the family physician, now took charge of the case, and applied counter-irritation to the abdomen. On the next day four caps were discovered in the fecal matter, which were found to be devoid of their fulminating powder. The child is now enjoying very good health.

CASE XXVI. *A corn straw swallowed by an infant. Its successful extraction by opening the abdomen.* By John G. Kyle, M. D., of Cedarville, Ohio. *Western Lancet*, 1848.

In the spring of 1846, I was called to see ——— Moore, a boy, aged two years; had been a very strong, healthy and fleshy child—now weak—much emaciated and suffering great pain in the bowels; face pale, extremities cold, no appetite, secretions nearly natural, abdomen very tender on pressure, with a swelling or ridge semilunar in shape, commencing on the left and terminating on the right side of the abdomen, and running so as nearly to divide the umbilical from the right and left iliac regions—about 14 lines in width, and one or two in height, skin slightly reddened, with the appearance of pointing at the extremity of the swelling on the right side, as if some foreign body was trying to make its way out, being, as yet, however, rather uncertain what direction it should take, in order to reach its intended destination.

The history of the case was that, fourteen days previous to that time, the boy was badly choked by something, which after some considerable difficulty he swallowed. After which his parents noticed nothing peculiar for two or three days, when he became fretful and peevish, lost his appetite, and had pain in his bowels. The parents thinking their child had colic gave anodynes, cathartics, and almost everything else, but finding him growing worse and sinking rapidly, brought him to the village, where I then resided, Roundhead, Ohio, for advice. Being called on, I found the boy in the condition already described. The history of the case, with the then present symptoms, led me at once to conclude that the boy had swallowed some solid indigestible substance, and it having become entangled in some fold of intestine, had passed through its coats and was now pointing to the surface, and that an operation would be necessary to relieve the boy. The parents were, however, rather doubtful about the success of an operation, and asked until the next morning to deliberate on the matter, to which I readily assented.

When the morning came, Mr. Moore called and requested me to operate on his son, as he believed he would die soon, unless immediately relieved.

The symptoms more aggravated than yesterday—I, in the presence of Dr. A. De Long, L. M. White, Esq., and several other gentlemen, proceeded to operate in the following manner: The boy being secured, I made an incision ten lines long, about equidistant from the-umbilicus and anterior superior spinous process of the right ilium, cutting carefully through the integument and abdominal muscles; a foreign body could now be felt under the peritoneum, which I punctured with a sharp pointed bistoury, and brought to view a brown *corn straw*, which I seized with a small pair of forceps and drew out; applied simple dressings, the wound healed by the first intention, and the boy regained his health in a short time. The corn straw was forked near the middle, measured *thirty-three lines in length, one in diameter*, and at the fork nearly three lines across. It had evidently been swallowed by the boy, fifteen days previous to the operation.

The novelty of the operation, the causes which led to it, and the happy result of the same, are the only apologies the writer has for thus making this case known to his professional brethren.

CASE XXVII. *Death from swallowing a table-knife.* Lancet, 1826.

This unfortunate man died at Middlewich, on Friday, 14th Jan., 1824. The public will recollect that in attempting some juggling tricks at Carlisle, he swallowed a table-knife rather more than nine inches long, which remained in his stomach without exciting any very acute pain, or producing any serious consequence until within a few days of his death. He left Carlisle with the intention of proceeding to London, where his mother resides, for the purpose of consulting Sir Astley Cooper. During the journey to Manchester he suffered much pain from the jolting of the coach; when finding himself unable to bear the motion of the carriage, he embarked in a canal boat, but being taken very ill in the boat, he was prevented from pursuing his journey further than Middlewich. This case having excited considerable interest in the public mind, as also in that of the profession, it may be proper to observe, that the body was opened the day after his death, and the knife found in the stomach, which, with the other viscera, was in a state of inflammation and gangrene. The handle of the knife (which was of bone), was dissolved, as likewise a considerable portion of the blade; so powerfully, indeed, had the knife been acted upon by the juices of the stomach, as to impress very forcibly on the minds of those who opened the body, a belief, that had the man continued at Carlisle, and been kept in a quiet state, the whole of the knife might have been dissolved, and the case have terminated favorably. The public prints having stated that Sir Astley Cooper had recommended an operation for extracting the knife, we deem it but justice to the above-mentioned gentleman to state, that he saw the man only about three hours prior to his death, when inflammation and mortification had already commenced.

We present also a statement of this case as published in South's edition of Chelius's Surgery, vol. iii.

Another instance is also related by Dr. Barnes, of Carlisle, of a juggler, who, on the 17th of November, 1823, accidentally swallowed a table-knife with a bone handle, together nine inches in length. The account given by the man was, that "having offered, for a small sum of money, to swallow a table-knife, a new one was accordingly brought from a neighboring shop. The method by which I pretended to swallow it was, to pass the handle and part of the blade down my throat, and hold the point of the knife fast with my teeth. When I was on the point of drawing it out again, some person, coming unexpectedly behind me, gave me a smart stroke on the back, the surprise of which caused me to lose hold of the point, and immediately the whole knife slipped into the stomach. I directly made very violent efforts to throw it up, but in vain, and the endeavors of the surgeon were equally useless." The man immediately became very much alarmed, expecting instant death. Attempts were made with the fingers and with long forceps to seize the knife, but it was far beyond their reach, and could not be felt on the external surface of the stomach. Next day he complained of pain in the stomach, for which he was bled, and a clyster given; and afterwards having pain in the left shoulder shooting across the chest to the stomach, he was bled again. Soon after the handle of the knife could be felt very distinctly by pressing gently on the navel, though slight pressure gave him considerable pain; but a single cup of tea or a little food of any kind distended the stomach so much that it entirely disappeared. Various suggestions were made, and among others gastrotony, but the patient would not consent to it. He was able to walk about a little during the day, and could sleep at night on his back, but not on either side. He was frequently squeamish and sick at stomach, and sometimes felt a severe twisting pain in that organ. He kept quiet till 28th December, when he left on his way to London, but died at Middlewich on the 16th January

following. From the account it is very evident that he never labored under any urgent symptoms, and seems to have been worn out rather by terror and anxiety. "On opening the belly," Hadfield says, "my first attention being of course directed to the stomach, I found the knife beginning to protrude through a gangrenous opening about two inches and a half from the beginning of the duodenum, on which part the knife had lain. After opening the stomach, I found that the point of the knife rested on that part of the greater curvature, almost exactly opposite to the cardia, and had likewise very nearly perforated the coats. * * * The handle of the knife was completely dissolved, the rivets had disappeared, and a considerable portion (at least one-third) of the blade also. What was left appeared exceedingly rusty and black." This knife is in the Museum of the Royal College of Surgeons. In the same collection are some knives voided by a soldier in St. George's Hospital.

CASE XXVIII. *A tenter-hook swallowed by an infant.* By George Bottomley, Esq., F. R. C. S., of Croydon, England. *Lancet*, 1829, vol. xvi.

I was sent for, on Monday the 13th inst., to visit a child sixteen months old, that had a tenter-hook in its throat. When I arrived, the blood was coming from its mouth, and it appeared to be in a dying state, and in most dreadful agony. In passing my finger down the passage, I fancied I could feel the point, but too low down to be extracted by the mouth. I then passed a probang, and, with some considerable force, removed it from its situation into the stomach, by which, when done, the child appeared very much relieved. I administered small doses of castor oil, with laudanum; it slept well that night, and continued perfectly easy afterwards. On the Friday following, it passed per anum, without either pain or difficulty, and the child is perfectly well at this moment.

The body of the hook measured one inch and three-quarters in length, and the hook itself three-quarters of an inch.

CASE XXIX. *A large egg-cup in the ileum of a man.* By Walter C. Dendy, Esq., M. R. C. L. *Lancet*, 1833, vol. xxv.

— Adams, a man 60 years of age, had been afflicted with inguinal hernia 25 years, which, although very frequently descending into the scrotum, had never been strangulated. Three months previous to his death he labored under diarrhoea, which terminated in dysentery, from which he was partially relieved. Three weeks before his death intense abdominal pain was felt, with retching, etc., the pulse being 95 and rather full. The inflammatory action was diffused, and no particular uneasiness was referred to the hernia, which was apparently reducible. Leeches and the antiphlogistic plan restored the patient to comparative ease. About a week subsequent to this the acute symptoms returned, with other signs, indicating strangulation or obstruction—such as stercoraceous vomiting and singultus, tumefaction of the abdomen, etc.—*the bowels, however, repeatedly ejecting very scanty fluid evacuations.* On minute examination I discovered a very small knuckle of intestine deeply situated, which appeared to be intimately adherent to the mouth of the sac. As there was in this tumor extreme tenderness, I did not hesitate, after a brief endeavor to return it by the taxis, to propose an immediate operation. The friends consented, but the patient refused, stating no reason but that he did not like to be cut. I therefore contented myself with palliative means, having by repeated gentle pressure returned the knuckle to the mouth of the sac, after which the stercoraceous vomiting ceased. He sank gradually, the abdomen becoming more and more distended, and on the 4th of December he died at 3 P. M., without having at any time during

his illness made the slightest allusion to the circumstance, which was eventually proved to have been the essential cause of his severe disorder.

I examined him on December the 5th, at 11 A. M., in the presence of Mr. Stephens, Mr. Brown, my brother and two other gentlemen.

The coats of the tumor were adherent, forming one extremely thin covering; there was no intestine or omentum in the sac, the lining of which was converted into a pulpy mass, and contained a small quantity of dark grumous fluid. The hernia was oblique, but by the close approximation of the rings, had appeared to be direct during life, as is often seen in very old herniæ. The intestine (a fold of the ileum) was adherent to the neck of the sac. On opening the abdomen the small intestines were seen much distended and discolored, and on turning the superior folds aside, my finger came in contact with a hard substance which projected through the coats of the intestine. This intestine was the cross-fold of the ileum, and on further examination we were astonished to discover, through its attenuated coats, an earthenware egg-cup closely impacted within it; the bevelled and indented edge of the cup resting on the spine; the broken stem of the cup, which projected through the bowel, near the crista of the left ilium. Immediately beyond the mouth of the cup, which pointed downwards, relatively to the course of the intestine, and was nearly filled with liquid feces, the ileum turned towards the left groin, where it formed the adherent hernia, and then again crossed towards the cæcum, the length of bowel between the cup and the cæcum being about ten inches. There was extensive adhesion between the two folds of the ileum and the peritoneum, about the mouth of the cup—ulceration having commenced through the coats, from the cup to the groin, evidently indicating the commencement of a process by which Nature intended to dislodge the extraneous body. At this time it was an object of my solicitude to ascertain, as far as morbid appearance could decide, by what channel this cup entered the alimentary canal. I therefore requested my friend, Mr. Stephens, (as I was engaged with my pencil at this point,) to trace the colon from the cæcum downwards. This inspection demonstrated the whole course of the large intestines to be in a comparatively healthy condition—the colon decidedly so, and the ileo-cæcal valves perfect—the caliber of these intestines being rather contracted from their symmetrical proportion. The small intestines, on the contrary, the ileum especially, were extremely distended and discolored; the graduated tints of crimson and dull purple evincing long-continued disease, which was still further confirmed by numerous patches of ulceration. The villous coat of the ileum was of a dull red color, and extensively disorganized.

Having thus briefly related the case to the Society, I would observe that the interesting points for discussion are, the *relative* importance of the cup and the hernia, and the mode of ingress. It is probable as the cup had traversed so far, that it would have reached the cæcum, perhaps the rectum, had not the hernia offered an insuperable barrier; and that on this opposition the *vis medicatrix naturæ* had commenced that process which, though in itself comparatively salutary, had established all the morbid phenomena in the vicinity of the hernia. Then, as regards the mode of introduction of the cup (which I may propose as a question), my own confident opinion is, that it was taken by the mouth. The healthy condition of the large intestines, and above all, of the ileo-cæcal valves, disprove, I think, the notion of its being introduced per anum. If the fræna Morgagni did not efficiently oppose its passage, still such violence would they experience by the intrusion of so large a body, that the lesion would be evident on dissection. It is difficult, too, to credit an inverted action so powerful as to draw up such a body to so intricate a position, and even beyond an almost constantly descended hernia. The disease and disten-

tion which pervaded the course of the small intestines, and the *dilated condition of the pylorus*, which I believe I have omitted, must incline us, I think, to the conviction of the cup having been *swallowed*, although the physiology of deglutition, and the relative anatomy of the fauces, especially the processes of the sphenoid bone, render it one of the most curious instances of which we have any record.

CASE XXX. *A leech in the alimentary canal of a child.* By Henry R. Wotton, London. *Lancet*, 1838, vol. xxxv.

J. A., a little girl, three years of age, residing at 94, Clipstone Street, Fitzroy Square, became a patient of mine in November, 1837; she was a healthy-looking, robust child, with whom one could find no fault, except that she was not so strong upon her legs as she might be, while the abdomen was tense and tumid; her head, spine, and limbs were well developed, and free from sign of rickets. I learned that the child had had several attacks such as I now witnessed; by one person she was supposed to suffer from disease of the brain, by others from mesenteric disease, and many thought worms were the cause of mischief, in which latter opinion I concurred. When I first saw her I found that there was much fever, hot and dry skin, sleep disturbed by frequent moanings, grinding of teeth, etc., eyes but partially closed; she referred the pain to the head and belly; to the latter the hand was frequently applied with the words, "pain, mamma." After a few days' treatment with calomel and scammony, and the acetate of ammonia mixture, the bowels having passed a good deal of viscid slime of different colors, the fit went off, leaving the tongue, which was before dry and much coated with a brown fur, clean. Though the knotted mucus seemed to form such a nidus for worms, none could be detected; however, the bowels had regained their tone, the belly became much softer and smaller, and the patient was thought well.

These attacks continued to recur at about the interval of a month, for several times, with nearly the same treatment, excepting that latterly I gave the mercury and chalk with rhubarb and cinnamon for a more continued time. On the 6th of April I was requested to attend quickly, and found that, the child having complained of much "pricking," the powder had been given more frequently, and in consequence a quantity of bloody lymph-like matter had been evacuated, and with it a *living leech*; relief soon followed, and since that time the little patient has thrived remarkably, and been free from molestation.

It is worthy of notice that for some hours up to the time this unexpected visitor appeared, the pricking was incessant about the rectum. It is what I should call a horse leech, of a dark brown color, without spots, belly clay color; its size is that of an ordinary leech; the mouth does not appear triangular as that of the *hirudo medicinalis*, but sharp like that of the *lumbricus teres*; it lived a week, during which time it swam about in the undulating manner in which leeches do. I still have it in my possession.

I made particular inquiries as to whether any water had been added to the vessel, and was assured by the mother and servant that it was perfectly clean and dry previously, and no one had been near it but the child; that immediately afterwards they perceived the "thing" to extricate itself from the gelatinous matter, and climb up the side of the vessel.

I find that the child, with an elder brother, had often been in the habit of getting to the water-butt, each assisting the other to drink from the tap; I have no doubt that the leech, perhaps when small, was swallowed in this manner, and had been the cause of considerable irritation, producing sympathetic disturbance of the brain.

I recollect two cases being recorded, I think, in *The Lancet*, where leeches

lived in the human stomach; in one the man was supposed to die from rupture of a vessel, and a leech was found in the stomach with a large quantity of blood; in the other case, a large leech was coughed up during a violent paroxysm, and the man lived.

At my request the water has been closely inspected when drawn, and a leech has been found in every respect like that referred to, but somewhat less, and not knotted, which is the case in the former one.

CASE XXXI. *An open penknife swallowed by a child.* Lancet, 1846, vol. xi.

John D—, aged seven years, residing at 10, Salisbury-terrace, Islington, on the evening of the 6th of August swallowed an open penknife, three inches long. The lad, a very sickly one, was subsequently visited by my father and myself; the symptoms afterwards were slight, chiefly febrile, with occasional griping pains, and some tenderness in the region of the bowels. The treatment enjoined was perfect quietude, fomentations, saline febrifuges, sedatives; the occasional exhibition of slight aperients, castor oil, &c. On the morning of the sixth day, contrary to the opinion of some eminent physicians, to whom I had related the case, the knife appeared with an evacuation, blade downwards, somewhat corroded, and not at all improved in appearance by its change of residence.

CASE XXXII. *Death from eating raw rice.* Lancet, 1847, vol. i.

Maria W—, a servant, aged twenty-two, previously in moderate health, but pale and anæmic, was taken suddenly ill with pain in the chest, while walking out in the evening of December 17th, 1846. At half-past seven, half an hour from the attack, she was suffering severe pain in the left hypochondriac region, attended by great restlessness. Percussion over the region of the stomach was not unusually loud. On inquiry, it proved that she had eaten in the afternoon, before her tea, a tumblerful of raw rice, mixed with milk, which she had been in the habit of eating, as well as arrowroot, sago, etc., in a raw state. The pain evidently arising from distention, caused by swelling of the rice in contact with the tea, and aided by the heat of the body, half a drachm of sulphate of zinc was administered as an emetic, which failing to act, was repeated after twenty minutes. The stomach was then relieved, first of what appeared to be tea and wash, and afterwards, at intervals, of a large quantity of half-swollen rice, equal in bulk to an ordinary dinner-plate, piled; and she felt considerable relief from pain. The stomach-pump was not employed in this case, because it did not appear calculated to relieve the stomach of its half solid contents; in similar cases, however, it might prove useful by favoring the escape of gas. At eleven the following morning, the pain increased suddenly, violently, with cold extremities, small feeble pulse, great abdominal tenderness; and she died at four P. M. On examination of the body, extensive peritoneal inflammation presented itself, with deposition of lymph agglutinating the intestines, and a copious effusion of turbid serum into the cavity of the abdomen. The stomach and duodenum were empty, with the exception of a few grains of raw rice at the pylorus, and perfectly free from inflammation. The small intestines were gorged throughout with a quantity of the same raw material that she had been in the habit of eating, apparently rice, arrow-root, etc., some raw and hard, and in parts so distending the intestines as to give the sensation to the fingers of feeling a bag of marbles, and some in a half digested state. The large intestines were loaded with feces. The heart was small, the lungs healthy. It is remarkable that the stomach was perfectly free from inflammation.

CASE XXXIII. *A hair-pin probably swallowed.* Lancet, 1851, vol. i.

About ten years ago, during my residence with a general practitioner in London, a man presented himself at the surgery, to have his arm examined, having suffered some time from a pricking sensation in it. The external skin was perfectly sound. On examination, a foreign body could be detected under the surface, just above the insertion of the deltoid. My friend cut down upon it, and the *full half* of a *woman's hair-pin* was extracted after some little trouble, in consequence of the half-arch forming a kind of barb. Your readers may smile, but I say a *woman's hair-pin*, because this was the conclusion arrived at, at a conclave of surgeons and ladies. The man himself was greatly astonished. I perfectly recollect cross-examining him carefully; that he was a very straightforward fellow, but could not account for it, either by occupation or accident. It may tempt some of your readers, perchance, to speculate on its arrival there; all that I can say, is my belief in Hamlet's declaration:—

“There are more things in heaven and earth,
Than are dreamt of in my philosophy.”

CASE XXXIV. *A spoon, pieces of whalebone, cloth, etc., extracted from the abdomen, after being swallowed.* By John Winzar, Esq., of Salisbury. Lancet, 1851, vol. i.

It is perhaps twenty-seven years ago since my late father, who was in attendance on a lady in this neighborhood (suffering from mental aberration), had his attention directed by the nurse to examine the lower part of his patient's abdomen, pain having been felt in that locality a few days previously. On pressure, he found a hard oviform substance underneath the skin; by the free use of his common bleeding lancet he cut down to it, and extracted from the opening thus made a silver teaspoon, of the usual length (about five inches). This was soon followed by three or four pieces of whalebone, of similar length, and a piece of red cloth, all of which had a few months previously been swallowed, during a period of more than usual maniacal violence.

The patient speedily recovered the little constitutional irritation thus set up, and reparation of surface was soon effected. The spoon is now in my possession, and some of the whalebones, though mutilated; the piece of cloth has been lost some time.

Some members of the family in this neighborhood will confirm this statement, if requisite.

CASE XXXV. *Thirty-odd spoon-handles, nails, etc., etc., found in the stomach of a patient.* By Henry Armstrong, M.D., F.R.C.S. Lancet, 1852, vol. i.

James R—, aged twenty-three years; single; hairdresser; one month insane; second attack; admitted November 4th, 1848. Is of middle height; somewhat full habit of body; countenance much confused; hair brown; eyes gray; pupils regular; head large, but not peculiar in form. Bodily, he is stout; pulse 80, full; bowels costive; tongue furred. Mentally, much lost; when spoken to makes a chattering noise, but giving utterance to nothing intelligible.

In Jan., 1849, had a slight attack of smallpox, of which he quickly got better. Up to the end of last year he varied but little either mentally or bodily; if anything, the mind became a little improved, but only for short periods together; he would again relapse. He would, however, always answer questions when put to him, and frequently was heard to say he wished to die. At times he was found to be in the habit of picking up gravel and pebbles and putting them into his mouth.

Dec. 23, 1851. This day he told the attendant that he had swallowed the

handles of two tinned-iron spoons, and gave up the bowls corresponding. When handled, the stomach was felt weighty and distended to the length of five or six inches below the false ribs on the left side, and upon deep pressure a sense of friction of foreign bodies was elicited. There was a body to be felt about the size of the ball of the thumb, and about four inches long, lying (apparently in the stomach) vertically to the left of the umbilicus from the margin of the hypochondrium downwards. He complains of no pain at all, nor of the handling, but says he often has pain "like cutting his heart out," says there is "a weight there (placing his hand on the epigastrium) which presses on his lights and intestines." He was placed in bed in the infirmary, and ordered rice diet and slops. When further examined in bed, it was found that the distended stomach was prominent on the left side just above the crista illi, and by change of posture of the patient was successively found at a corresponding point on the opposite side, and resting above the pubis. It is obvious, through the relaxed wall of the belly, that there is a large collection of angular bodies (pebbles), besides other longer bodies which can be poised lengthwise between opposing fingers. His stools are of green-gray color (stained by iron), are consistent and lumpy; on percussion, the liver and spleen appear of average size only, and nothing abnormal is felt in the belly except this distended stomach. Tongue clean and moist; pulse about 75 to 80, rather soft. In conversation repeatedly on the subject, he persists that he swallowed the two spoon-handles on the 23d inst.; that he has repeatedly done so, the first time he did it being on Nov. 1st; and varies in saying that he had altogether swallowed twelve, and (at another time) twenty-seven similar spoon-handles.

Also, that he had formerly swallowed sand and pebbles as long as two years since, and has done so as lately as from two to three months back, (he gives these dates by reference to concurrent circumstances;) and that he did it to effect suicide because he was detained here.

28th. Has had repeatedly an ounce of castor-oil, which has kept the bowels open twice or three times daily. Stools dark greenish-gray or black, costive, breaking down very easily on pressure; has had fluid food; pulse not disturbed and tongue clean (not raw nor red); urine natural; appetite but small.

31st. To-day some complaint of pain and tenderness in the belly; some sense of fullness. The stools as before, but covered with a yellowish creamy substance, which floated strongly in flocculent flakes in the urine found in the close stools. At first, the substance was conceived to be pus, but, examined microscopically, showed to be composed entirely of fat or oil, with crystals of triple phosphate, animal striped muscle, and vegetable hairs and epidermis, besides yellowish granular matter.

Jan. 3, 1852. This morning vomited his breakfast, consisting of tea and bread and butter, which was returned of an inky color, but after standing some hours, became of much browner color (from oxidation of protoxide of iron?), complains of no pain in stomach. Last night slept well, and this morning appeared as well as usual, but immediately after rising became sick and vomited.

5th. Yesterday, bowels shut up, and some sickness in the morning; no complaint of pain; pulse 90; tongue clean. Had an ordinary black draught to-day. Bowels but scantily open.

7th. Yesterday, vomited after breakfast, but not to-day. Appears weak and low. Was yesterday put upon a mixture containing tincture of calumba and tincture of orange-peel, with an ounce of sherry twice a day.

9th. Much about the same; no vomiting for three days past; tongue

slightly furred, of a whitish color; bowels need aperients every day or two. He takes castor-oil with the best effect. Pulse about 90; rather weak and sharp; no tenderness of belly; the stools constantly watched up to this date; no stones have passed; they are still stained blackish.

20th. Has continued much about the same, some days refusing his food, in the morning having nausea and vomiting. Bowels act slightly; still the stools are of the same color. Has a mixture of decoction of aloes and calumba, with orange-peel tincture, and changes of diet, so as to please his fancy as much as possible. Although very thin, is perhaps a little plumper than he was. Tongue always not at all affected; pulse 90 to 100; no even-
ing accession of fever now.

Feb. 2. No change; apparently no stouter. The foreign bodies in the stomach are still felt as distinctly, and in the same way as before. Now and then he vomits a meal; pulse still ranges from 100 to 110; mentally much about the same. Continued medicine.

March 5. No change mentally; bodily, perhaps, a little stouter than he was; appetite good; stools still ferruginous; otherwise the same.

23d. Half-past one P. M.: Up to this period he continued much as at the last notice; if anything, he had gained flesh, and his general appearance had improved; his appetite was good; he slept well, and complained of no pain or inconvenience in the belly. This afternoon, however, about half-past one o'clock, while sitting out of doors in the airing-ground, he was suddenly seized with severe pain in the abdomen, which bent him double, and caused him to fall to the ground. He was at once put to bed in the infirmary, when he began to vomit, upon which a sedative draught was given. In the course of the afternoon, he complained of occasional "spasms and colic" (as he termed it), and vomited a little two or three times; the belly, however, was by no means tender to the touch on moderate pressure. He lay chiefly on the left side, and was unwilling to be disturbed in any way. In the evening about six P. M., the symptoms became worse, and he now complained greatly of pain in the belly, but chiefly in the left hypochondriac region. His countenance became anxious, and bathed with cold perspiration; the pulse very small and rapid, about 140; the pain in the belly, on pressure, or on being moved, very severe. Eighteen leeches were now applied to the abdomen, followed by warm poultices, and two grains of calomel, with a quarter of a grain of opium, were given every two hours. During the night he became gradually worse, complaining of intense pain in the belly, and feeling as if he were on fire, moaning frequently, and calling out for water.

At seven o'clock this morning (the 24th), he was found to be fast sinking, and at a quarter before nine he expired.

Post-mortem examination seventy-eight hours after death.—The general appearance of the countenance was calm and placid; the body somewhat thin and spare. Over the entire surface of the abdomen there was considerable dullness on percussion (but this in a much more marked degree in the left hypochondrium), extending to within an inch and a half of the left erista ilii, and about two inches in width. Caput: Upon removing the calvaria, considerable opacity of the membranes of the brain was observed, but this more especially upon the superior surface of the two hemispheres; the brain itself, throughout its entire structure, was apparently healthy; the ventricles contained but the usual quantity of fluid. Thorax: On removing the sternum and cartilages of ribs, a patch of recently effused lymph of the size of a crown piece was seen lying on the anterior convex surface of the right lung, about its middle; posteriorly, this lung was slightly adherent at its superior

part; the structure of both lungs was quite healthy; the heart, if anything, was a little larger than usual, but healthy as to its structures. Abdomen: On removing the abdominal parietes, the cavity was observed to be filled with a dark greenish-gray fluid, with which a considerable amount of recently effused lymph was intermixed. The whole peritoneal surface was injected, of a deep rose color. The stomach was seen lying in the left hypochondriac region, considerably more vertical than usual, and apparently much contracted, and, together with the whole mass of intestines, with the omentum, considerably engorged with blood. Upon pressing on the stomach, a hard mass, about five inches long and two wide, was felt lying in its axis, and some fluid of a dark greenish-gray color was seen issuing from an orifice on the anterior surface of the duodenum, about an inch and a half from the pylorus, of a size to admit a swan's-quill, oval in shape, with sharp-cut edges. On feeling the duodenum, a body of about five inches long, of the thickness of a quill at one end, and flattened out at the other, with the latter towards the pyloric orifice of the stomach, could be distinguished. The stomach and duodenum were now removed, double ligatures having been put on, and the space between them divided. An incision was now made along the lesser curvature of the stomach, when a quantity of fluid resembling that seen on opening the abdomen, and of a peculiar odor, poured out. A mass of handles of *tinned-iron spoons*, together with *nails* and other articles, were now seen closely packed together, the spoon-handles, for the greater part, lying with their flattened extremities towards the cardiac end of the stomach. On removing them, there were found to be *thirty-one entire spoon-handles*, of about five inches long; *two half-handles* (flattened ends); *two half-handles* (thin ends); *nine nails*, varying in size from a garden wall nail to a spike nail; rather better than the *half of the iron heel of a shoe*; *one screw*, of two and a quarter inches long; *four pebbles* the size of a hazel-nut; and *one metal button*; the weight of which conjointly amounted to two pounds eight ounces. The whole of them, when first removed, were stained of a black color, but on exposure to the air became quickly further oxydized. Many of the handles had become much thinner, and some were acted on only in parts; others were apparently unchanged, except as to color; a number of them show the fibrous texture of the iron, and have the angles at their extremities rounded off, or somewhat blunted. On opening the duodenum, an entire spoon-handle was seen in its axis, with its flattened extremity towards the pyloric end, and opposite the perforation above mentioned. The coats of the stomach were considerably thickened, and the mucous membrane presented a very hypertrophied and rugous appearance, and was stained all over of a dark greenish-gray color; the duodenum towards its termination presented an appearance closely allied to that of the stomach, though not in so marked a degree, its surface being also tinged of the same color, and its coats thickened. The whole of the coats of the small intestine throughout its course were somewhat thickened and injected, more especially the mucous; and, scattered over its whole surface, in some places more thickly than in others, numerous papillæ were noticed, varying in size from a mustard-seed to that of a tare. The perforation in the duodenum was somewhat thickened as to its margins (internally), and not so sharp as the margins of it externally. Peyer's glands were apparently not to be met with. In the large intestine the solitary glands were unusually large and distinct. The entire lining membrane of the intestine was stained of the same color as that of the stomach. All the other organs in the body were found healthy.

CASE XXXVI. *Buttons in the alimentary canal of an infant.* By Dr. Homans, of Boston. American Journal Med. Sciences, 1851, vol. xxi.

A male child, aged 14 months, on the 23d of October seemed quite unwell, after passing an uneasy night. There was strong effort at expulsion of matters from the bowels. Under these straining attempts, some feces passed, without relief of symptoms; pulse accelerated; skin hot; tossing of head, etc.; slight vomiting also occurred; suspicion of intussusception arose. In the night, the above symptoms having been on the increase for twenty-four hours, a teaspoonful of castor oil was given. Through the night severe pain of paroxysmal nature; the intervals marked by perfect ease; the pain being compared by the mother to uterine efforts in parturition. On the following day, the child was much more ill and feverish, and Dr. H. saw it at nine o'clock, A. M.; tenesmus urgent; patient moaning; skin hot; pulse full and quick; a slight discharge of bloody water from bowels. On palpation of abdomen, a hard swelling was detected, about half way between umbilicus and crest of right ilium, of the size of a pullet's egg. On examination by the rectum, a hard mass was discovered, somewhat yielding to pressure by the finger. A large enema was given from a powerful syringe, which was unsuccessful; the fluid being returned before overcoming the obstruction. A second injection was given; in a short time an explosive sound (internal) immediately preceded the discharge of a large lump of solid feces, pushing before it a small *button*; several dejections followed in quick succession, composed of solid and fluid matters, among which were passed *seven buttons*, made from horn, porcelain, and metal, and varying in size from those used for pantaloons, to the ordinary shirt button. The child was soon relieved, and has been well since. Nothing had passed from the bowels for forty-eight hours previously to the attack.

CASE XXXVII. *Swallowing several knives.* Chelius's Surgery, by South, vol. iii.

Of the foreign substances received into the stomach, the most remarkable account is that given by Dr. Marcet, of the sailor who swallowed a number of clasp knives. In June, 1799, after having witnessed a display of jugglers' knife-swallowing, he, in a drunken fit, boasted he could do the same, and accordingly swallowed four pocket-knives successively. On the following afternoon he passed one knife by stool, and on the following day two more, but the fourth knife never came away, nor gave him any inconvenience. In March, 1805, in the course of a couple of days, he swallowed fourteen knives more; but on the following morning was attacked with constant vomiting and pain at his stomach, which compelled him to go to the hospital, and in the course of a month, "he was safely delivered of his cargo." In December of the same year, he swallowed on one day five, and on the next fourteen more. He was very ill the next day, and obliged to put himself under medical care, but without benefit till three months after, when, having taken castor oil, he felt the knives "dropping down the bowels," and became easier, but was not aware of having passed any. In June, 1806, he vomited a knife-handle; in November, he passed some fragments, and again in February, 1807. In August of the same year he was admitted into Guy's Hospital, where at first his account was not believed, but he held fast to his story, and as he suffered intense pain at the region of the stomach, and a hardness was thought to be felt, some credence was at last given, and his stools being noticed, were found of a deep black, indicating an accumulation of ferruginous matter in his bowels. On examining the rectum, a portion of the knife was felt lying across it, but could not be extracted on account of the great pain

he suffered in the attempts to grasp it. Various attempts were made to dissolve the knives, but without success, and at last, in March, 1809, he died in a state of great emaciation. On examination, one of the blades and one of the back springs were found in the intestines; the latter, four inches and a half long, had transfixed the colon opposite the left kidney, and projected into the cavity of the abdomen, while the other was stretching across the rectum, with one of its extremities actually fixed in the muscular parietes of the pelvis. No stool had, however, escaped, nor were there any signs of active inflammation. In the stomach were thirty or forty fragments, of which thirteen or fourteen were evidently blades, much corroded and diminished in size. They are all in the Museum at Guy's Hospital.

CASE XXXVIII. *A madman swallowing a silver tablespoon.* Chelius's Surgery, by South, vol. iii.

Langstaff gives an account of a madman who swallowed a silver tablespoon in October, 1827. Soon after his health gradually declined. Although he lived abstemiously, his digestive organs were disordered; he suffered from dyspepsia, and frequently complained of an acute pain in the region of the cæcum; and he persisted in declaring that all these symptoms were occasioned by the spoon he had swallowed. His account was disbelieved, especially as cautious examination of the belly was made without detection of any foreign body. He continued to suffer from the effects of pain in the situation of the cæcum and colon, and frequently said he felt the motion of the spoon. He was teased with diarrhoea, and the evacuations were often mixed with blood and pus. Symptoms of diseased liver came on, and were followed by ascites and œdema of the lower limbs. Under these circumstances Langstaff tapped him, drew off a bucketful of water, and, as he was "greatly emaciated, I was induced," says Langstaff, "to carefully examine with the hand if I could feel the spoon, when, to my astonishment, I detected a solid substance in the situation of the cæcum, which induced me to believe that it was the spoon he had swallowed." He died about twenty months after, and on examination it was found that "the mucous coat of the stomach, as well as the duodenum, jejunum, ileum and cæcum were more vascular than natural, and there were evident signs of their having been ulcerated on different portions, and that nature had put a perfect stop to the ulcerative process, by uniting the boundaries to the submucous tissue. The greatest degree of mischief had been effected by the passage of the spoon through the ileo-cæcal valve, which was greatly dilated and the circumference thickened. The mucous coat of the cæcum was nearly destroyed by ulceration. The spoon was found in this intestine, with the bowl downwards, where it had formed a large sac, which prevented its passage into the colon." The preparation is now in the Museum of the College of Surgeons.

CASE XXIX. *Swallowing a knife accidentally.* Chelius's Surgery, by South, vol. iii.

Barnes quotes from Becker the case of a young peasant, who, on the 29th of May, 1635, whilst endeavoring to produce vomiting with the handle of a knife, let it slip from his fingers and pass into his stomach. He was much frightened, but able to go about his usual occupation. It was, however, determined to remove the knife by operation, which was done on the 9th of July following, by a surgeon and lithotomist, named Shoval. "A straight incision was made in the left hypochondrium, two fingers'-breadth under the false ribs; first through the skin and cellular membrane, then through the muscles and peritoneum. The stomach subsided and slipped from the fingers,

which prevented it from being immediately seized; but it was at length caught hold of with a curved needle, and drawn out of the wound. A small incision was then made into it upon the knife, which was then easily extracted. The stomach immediately collapsed. After the external wound had been properly cleansed, it was united with five sutures, and tepid balsam poured into the interstices. Tents impregnated with the same balsam, and a cataplasm of bolus earth, the white of an egg, and alum, were then applied." Two sutures were removed next day, on the following day two more, but the fifth is not noticed. On the fourteenth day after the operation, the wound had healed. Dr. Oliver saw this knife at Königsberg in 1685, and says it was six and a half inches long. The patient completely recovered.

CASE XL. *Crushing a glass tumbler with the teeth, and swallowing the pieces.* By the late M. Portal, of Paris. *Gazette des Hôpitaux*—London Med. Gazette, 1838.

I saw a young man, who, during a drinking bout, challenged his companions to swallow a part of his glass; he broke the fragments of his glass with his teeth, and then swallowed them; but not with impunity. He was soon seized with frightful cardialgia; convulsive movements came on, and fears were entertained for the life of this giddy-headed young fellow, when his friends came for me. I first had him bled; but as the principal object of the treatment was to extract the glass which caused the symptoms, I was much embarrassed as to the means of doing so. On the one hand, I saw that tartar emetic would increase the irritation and contraction of the stomach, and that the glass would get more closely into its parietes; on the other hand, purgatives would drive the glass into the intestinal canal, the long extended surfaces of which would probably become excoriated. I thought it right, therefore, to advise the patient to fill his stomach with some food which might serve as a recipient to the glass, and then to produce vomiting. Some cabbages were procured and boiled; the patient ate a considerable quantity of them, and I then gave him two grains of tartar emetic in a glass of water. The patient soon vomited, and threw up a considerable quantity of glass among the cabbage. He subsequently took a good deal of milk, was put into a bath, and had some emollient clysters; and as he had become very lean, in spite of these methodical aids, I advised him to drink asses' milk, which he did for more than a month, and which restored him to his former state of health.

CASE XLI. *Gastrotomy successfully performed to extract a fork accidentally swallowed.* *Lancet*, 1828, vol. xv.

A lady at Bordeaux, 24 years of age, inadvertently let a small fork slip into the throat; it was swallowed, and descended into the stomach. Here it remained for some months, hardly producing any symptoms; but, at the end of this period, the most violent vomiting came on, and soon brought the patient into a most dangerous condition. By the advice of MM. Delpech and Fages, gastrotomy was performed by M. Cayroche; the fork was easily extracted, and within twenty days the wound had completely healed.

CASE XLII. *Gastrotomy for extracting a common leaden bar, swallowed on a wager.* By T. B. Neal, M.D., of Columbus City, Ohio. *Med. Examiner*, 1855.

The subject of this notice, L. Bates, æt. 27, resides at Wapello, twelve miles from this city. During the three days preceding Christmas last, he had been drinking common whiskey; and on that day, while intoxicated, attempted, on a wager, to swallow a bar of lead. The bar was 10 inches long, $\frac{1}{2}$ inch by $\frac{3}{4}$ of an inch thick, and weighed one pound.

Thrusting it far down the œsophagus, it slipped from his grasp, and immediately entered his stomach. Dr. Bell was sent for at once, but as Bates had formerly been a juggler, the Doctor, thinking that he was at some of his tricks, refused to go. Bates, not much concerned at the non-attendance of the physician, worked for three days after the accident in a pork-house, with but little inconvenience. During the night of the third day, however, he was seized with great pain in the stomach, accompanied with shooting pains along the spine, extending from the lumbar region to the sacrum, and thence to the hips. The next day he walked to Columbus, a distance of six miles, and sent for Dr. Robertson, the oldest physician in this county, to attend upon him. Dr. R. requested me to see the case with him. We found him, on the fourth day, comparatively easy. His tongue was white, breath very foul, and bowels constipated. Upon careful examination, the œsophagus was found perfectly free and unobstructed. We administered to him morphia in small doses, and attempted to act upon his bowels, and neutralize the poisonous effects of the lead by large doses of sulphate of magnesia. Under this treatment, although the bowels were but slightly disturbed, he was rendered astonishingly comfortable, and could walk about a little. On the 3d of January, the tenth day after the accident, the severe gastric pain again returned, accompanied with vomiting, and other symptoms of gastritis.

The operation of gastrotomy was now resolved upon. Dr. Bell, of Wapello, performed the operation by making an incision through the walls of the abdomen, from the umbilicus to the false ribs, four inches in length and two inches to the left of the median line. The peritoneum being divided, Dr. Bell introduced his hand, and pushing back the protruding intestines, found that the bar of lead was nearly perpendicular, the upper end inclining a little to the left. The bar was pushed up, until the lower end came opposite the abdominal opening. It was then seized, and an incision made in the walls of the stomach, just large enough to admit of its extraction by means of forceps. The contraction of the muscular coat of the stomach caused the incision in the organ to close perfectly and without trouble. The external wound was stitched, and a compress applied.

The operation was performed between three and four o'clock P. M.; the day was cloudy, and towards sunset grew quite cold. The patient was entirely under the influence of chloroform until about two minutes before the last stitch was taken, when he revived somewhat, and expressed himself as feeling better than he had done before. When the chloroform was first administered to him, he vomited freely; hence, when the opening was made in the stomach, nothing escaped therefrom, that viscus containing nothing but the leaden bar.

For the ensuing three days the system of the patient was kept under the influence of opium, and nothing but mucilaginous drinks, in small quantities, allowed as diet. He recovered as well as a patient does of uncomplicated gastritis.

I give you below the condensed notes of the progress of the case, taken by Drs. Bell, Robertson and myself.

January 4, 10 A. M. Patient tolerably quiet; pulse 85, and moderately full; some fever and thirst; vomited once, and bowels moved freely during the night, though he has been taking small doses of morphia every two hours; complains of pain in the stomach and bowels; continued the morphia, and ordered two tablespoonfuls of toast-water every two hours.

3 P. M. Patient still quiet; pulse 85, and rather hard. Took 3x. blood from the arm. Continued morphia and toast-water.

5th, 10 A. M. Rested well last night; bowels undisturbed for eight hours; then at 4 A. M., watery dejections; complains of nausea: pulse 83, and soft;

tongue white; no soreness in the gastric region; some cough; ordered the following pill every two hours and a half: R.—Hydrarg. chlorid. mit., gr. ss; pulv. ipecacuanhæ, gr. j; morphia sulphat., gr. ¼.—M. ft. pil. i.

5 P. M. Complains of heartburn, nausea, thirst, and frequent alvine evacuations; pulse 73, strong and full; craves acid drinks. Prescribed a weak solution of citric acid; it did not appear to agree with the stomach. At 9 o'clock, slight vomiting; therefore directed morphia, gr. ss; pulv. ipecac. gr. ii. At 11½ o'clock, administered morphia, gr. ss. In half an hour patient fell into an easy sleep, his pulse growing softer. Directed gum-water and ice-water, a tablespoonful alternately every half hour, and the morphia every two and a half hours.

14th. Met patient standing in the door; appetite good; pulse 70, and soft; wound looks well; dressed it, and ordered one blue pill, to be followed by an enema if it failed to operate.

On the 16th, the wound was nearly healed, and he had walked half a mile to see a neighbor. At the time of writing this hasty epistle (Feb. 19th), he has been out of the settlement some two weeks, and I learn has been at work. What his exact condition is at present I do not know, not having seen him since he began to go abroad.

CASE XLIII. *Accidentally swallowing a glass phial.* By M. Ramos Borquela. Virginia Med. and Surg. Journal, 1856.

The list of foreign bodies which have traversed the digestive tube is already very long, but we have never yet heard of a glass bottle having been swallowed; yet the observation of M. Ramos proves that this is not impossible. It is true that the bottle in question was a little flask about a finger and a half in diameter, which was unintentionally swallowed by a child thirteen years old, and was passed from the anus in about fifty hours.

M. Eseolar, in the same journal, *El Siglo Medico*, reports an instance, not less curious, of a child five years old, who *swallowed a glass pendant* as long as the finger, which sojourned three days in the bowels, and made its appearance by way of the anus. In this case the angles of the crystal were nearly effaced, and its polish destroyed by the action of the gastric juice.

CASE XLIV. *Swallowing bullets, and their rapid passage through the alimentary canal.* By R. Trafford Whitehead. *Lancet*, 1848.

In the *Lancet* of December 2d, 1848, Mr. Litchfield relates a case of a child swallowing a bullet, and inquires if any of your readers have met with anything similar. With your permission I will state the results of two cases I have met with. The first was that of a boy, aged four years, who had swallowed a bullet while at play. An emetic of ipecacuanha was administered, without causing the stomach to reject anything but the food that had been taken. A smart dose of castor oil was given, which, after acting freely, caused the offending substance to be passed with considerable force into a chamber utensil, the patient calling out, "Holloa, father, I've shot a bird." Beyond a little griping, no tenesmus or other unfavorable symptom presented itself. The ball was passed in thirteen hours after it had been swallowed.

The second case was that of a little girl aged fourteen months. I saw this child immediately, and before the bullet had been passed into the stomach; the face and neck were congested, and almost purple, and the symptoms of suffocation urgent and alarming. I was apprehensive that the ball might have lodged in the glottis; on passing my finger into the mouth, the substance passed downwards and immediately relief followed. The child was made to swallow two drachms of castor oil, to be repeated every two hours. After

these doses had been taken the bowels acted, and continued to discharge their contents at intervals, for four hours, at which time the bullet passed. There was much griping and considerable tenesmus (which subsided when the ball was discharged), but not to such an extent as to cause prolapsus ani. The bullets, in these cases, were not as large as that in Mr. Litchfield's case, being such as are commonly used in ordinary rifle shooting.

CASE XLV. *A boy swallowing nine pistoles in a piece of cloth—tracheotomy—they are then pushed into the stomach.* Dr. Gross on Foreign Bodies in the Air-passages.

The celebrated case of Habcot, detailed in the Memoirs of the Royal Academy of Surgery of France, is well known to the profession. A lad, aged fourteen, having been told that gold, when swallowed, was perfectly harmless, attempted to dispose in this way of nine pistoles, wrapped up in a piece of cloth, in order to hide them from thieves. The packet being too large to pass the œsophagus, lodged in the narrow part of the pharynx, where, by its pressure upon the windpipe, it produced the most intense distress, attended with a sense of suffocation, and a livid and swollen state of the face and neck. Various attempts were made, but without success, to extract the packet. At length, perceiving that the patient was on the point of perishing, Habcot resolved to perform bronchotomy. The operation was no sooner done than all the bad symptoms vanished; the breathing being immediately re-established, and the countenance resuming its natural appearance. Unable to extract the pistoles, Habcot pushed them with a leaden probe, into the stomach, from whence they descended into the bowels, and were discharged at different times from the anus. The wound in the trachea soon healed, and the patient happily recovered.

CASE XLVI. *A man having fifty-two foreign bodies in his stomach.* Translated from Chopart's *Maladiés des vois Urinaires*.

In November, 1774, Messrs Fournier et Duret, Demonstrators of Anatomy at Brest, communicated to the Academy of Chirurgie the following astonishing case of omnigenous swallowing: André Bazile, a galley-slave, aged 38 years, a man of ravenous appetite, who would often eat chalk, plaster or earth, with his food, was received into the Marine Hospital of Brest, 5th September, 1774. Nothing satisfactory could be obtained of the history of the case. He complained of pain in his bowels, of oppression and constipation. He vomited at times a blackish matter. He swallowed, with difficulty, solid nourishment or even eggs, but could drink fluids. No tension or swelling was perceived in the abdomen. Notwithstanding the treatment, he died suddenly on the 10th of October, in vomiting. As he was known to be a great eater, it was not surprising to find his stomach of extraordinary capacity. It extended from the hypochondriac region of the left side, even to the iliac, and was twelve inches in length. This organ contained, 1st, a piece of barrel-hoop nineteen inches in length and one inch in width; 2d, several fragments of furze, oak or fir; four of which were six or eight inches in length, and six, twelve, or fifteen lines in width; 3d, a wooden spoon five inches long; 4th, one of pewter, seven inches, having the bowl split in two; 5th, several other spoons of pewter broken into different fragments; 6th, three pieces of a pewter buckle; 7th, two pieces of a funnel pipe; 8th, the steel for a tinder-box, weighing one ounce and a half; 9th, a pipe and one piece of its funnel, furnished with thread; 10th, several pointed nails about two inches in length; 11th, a wooden-handled knife, closed, three inches nine lines, by twelve lines; 12th, two pieces of window-glass, eighteen lines in length; 13th, five prune seeds; 14th, a

small piece of horn; 15th, a piece of shoemaker's leather three inches long, and another of six lines; in all, *fifty-two pieces*, weighing one pound six ounces and a half. These were presented to the Académie de Chirurgie.

SECTION II.

WOUNDS OF THE ABDOMINAL WALL.

CASE I. *Extensive laceration of the abdominal wall without interrupting gestation.* By J. C. Bradbury, of Old Town, Maine. Boston Med. and Surg. Journal, 1852.

Mrs. V., a large muscular woman, of about 40, at near the conclusion of the seventh month of pregnancy, was standing upon a platform, in the act of shaking a rug, when the plank on which she stood slipped from under her, and she was let down upon a picket of a fence on which the platform rested. The picket penetrated the integuments and muscles of the abdomen just below the umbilicus, lacerating these tissues, including the peritoneum, from the point of entrance, in a transverse direction, on each side, to near the crest of the ilium, making a wound, I should think, of near twenty inches in length. The upper lip of the wound, being convex below, was folded up over the epigastric region. The contraction of the muscles below, added to this circumstance, gave a width to the wound, of some six or eight inches, which afforded a very accessible view of the abdominal viscera, the most prominent of which was the distended gravid uterus, containing a fetus near maturity, of extraordinary size, visibly *struggling with great violence* from the contusion, which must have been somewhat severe, and was at the central and most prominent part of the uterus. This circumstance, added to the extent of the wound, presented a most formidable and extraordinary spectacle.

In a few minutes from the time of the event, the patient was narcotized by chloroform to insensibility. The wound was carefully adjusted, and secured by sutures and adhesive straps. Before the specific influence of the chloroform had passed off, a large dose of morphine was given, and repeated sufficiently often to prevent pain or clear consciousness, till time had elapsed for the adhesive or suppurative process to become sufficiently established, to secure the patient against inflammation or suffering, when the soporific influence was permitted partially to subside, but continued to a less extent. On the fourth or fifth day, the wound was found apparently firmly united by the first intention, through its whole length. There had been no indications of suffering, since the first impression of the narcotism; general nervous or vascular excitement scarcely perceptible; no hemorrhage of importance from the wound, at the time of its occurrence; no artificial depletion, save a saline cathartic, or other sedatives than morphine.

About the sixth day, when the period for anxiety seemed to have passed by, and I was contemplating, with a good deal of satisfaction, the happy issue of the case, contrary to special direction (to *gratify a good appetite*) the patient took a pretty full meal of indigestible food, which occasioned considerable gastric and constitutional disturbance. The wound immediately assumed a less healthy appearance, became of a dark venous complexion, and the medium by which its middle portion was united, to the extent of one-third of its length, was broken up. Some sloughing of its edges followed, which were afterwards restored by granulation; an event that, it would seem, might help to correct the erroneous, but popular impression, that the alimentary canal alone suffers from such violations, and perhaps may profitably enforce upon the minds of many of the profession, the fact that a *strict and judicious regimen* is not less

important in surgery than in medicine. But for this provoking indiscretion, the constitution would scarcely have recognized this extensive injury.

In about two months from the time of the accident, and at the *full period of gestation*, Mrs. V. was delivered, by a natural, quick and easy labor, of a healthy child, weighing about ten pounds, evidently none the worse, in any respect, for the misfortune of its mother, or its own violent and untimely disturbance.

The particulars of this case, that have to me given it interest and importance, are, in the first place, so general a union by the first intention, of so extensive a lacerated wound. Second, the almost entire absence of constitutional disturbance, from a wound of such tissues and of such magnitude, in a plethoric habit, and in a condition ordinarily so irritably disposed. In third place, it was expected that a lesion of this character and magnitude would have been productive of constitutional disturbance, incompatible with the continuance of gestation, and miscarriage would have been the result; an event that would probably have been fatal to the child, and increased materially the perils of the condition of the mother. But both were made to sleep through their perils, till all tendency to irritation was passed, and gestation went on to maturity, without a threatening indication.

CASE II. *Penetrating wound of the abdomen in a pregnant woman.* By M. Scarruffi, of Tuscany. American Journal of Med. Sciences, 1845.

The following case is certainly one of the most extraordinary recorded in the annals of science, of the introduction of a foreign body into our tissues. Remarkable at once from the considerable size of the body, it derives additional interest from the fact that the woman thus injured was pregnant at the time, and from the fortunate recovery which followed so serious a wound.

On the 4th of June, 1843, at 10 o'clock A. M., a woman 24 years of age, the mother of two children, and five months advanced in pregnancy, was engaged in picking leaves from a mulberry tree, when the branch upon which she was standing broke, and she fell upon a stake placed near the tree. Some persons who were attracted by her screams, seeing her stretched upon the ground, endeavored to raise her; but they experienced great difficulty, for the stake, which had penetrated very deeply into her thigh, riveted her to the ground.

The first attempts at extraction served only to break the stick at a point seven inches within the substance of the thigh which it had entered. Having no longer any hold upon the stick, the physicians had the patient conveyed to the hospital, where M. Vannoni saw her. Her face was pale, eyes sunken and dull, surface cold, pulse small and weak, respiration feeble, speech hesitating, with nausea and vomiting; she had not been able to urinate since the accident occurred, 15 hours before. On the posterior part of the thigh, and a little towards its inner aspect, just below the superior third, was a lacerated and contused wound four inches wide, involving the skin and muscles. Another wound of the same kind, but only four or five lines wide, and almost confined to the skin, existed in the left lumbar region, on a line with the exterior margin of the sacro-lumbalis muscle. Here a tumor was felt, hard, slightly movable, traceable as far as the antero-superior spine of the ilium, and seeming at this point to disappear in the lower pelvis. If this was touched, the patient experienced pain extending from the wound of the thigh towards the tuberosity of the ischium, and more severely towards the wound in the loins.

The removal of the stick was commenced 2½ hours after the entrance of the patient. It was broken at a point too deep to be reached from the wound in the thigh; it was necessary to cut down upon the tumor which it formed in

the lumbar region, first through the integument, then the muscles, and finally the peritoneum. The index finger of the left hand was then introduced, and a probe-pointed bistoury slid along upon it, by which the aperture was enlarged. It was necessary to push down the piece of wood in order to disengage it from the two lower ribs, which its superior bifurcated extremity had in a manner clasped on their inner faces. It was then seized with a pair of stone-forceps, and thus was extracted a knotty stick eight and a half inches long, and between three and four inches in circumference. At the moment of its withdrawal one of its branches was broken. Immediately, M. Vannoni introduced his finger, to ascertain if there was any other fragment remaining; but he could feel only the uterus exposed. The edges of the incision were approximated by suture; and the wound in the thigh was closed by adhesive plaster.

The reaction was speedy, and so great as to render bleeding necessary. Abortion occurred at the end of six hours; the placenta exhibited an extravasation of blood upon its uterine surface.

The introduction of the catheter was requisite for several days. The next day, and the day following, the patient was bled twice, and was twice leeched. The cicatrization of the wounds was retarded by an attack of erysipelas, and by the escape of two pieces of bark, which were discharged on the 3d and 4th of July.

When the patient left the hospital on the 11th of Sept., the exact distance between the wound on the thigh and that in the loins, was found to be seventeen inches and two lines.

CASE III. *Penetrating wound of the abdomen made by the handle of a hay-fork.* By Charles R. Kemper, M. D., of Culpeper Co., Virginia. Steethoscope, 1854.

On the 15th April, 1849, a negro man belonging to G. J., aged about 40 years, weighing 260 pounds, jumped from a hay-loft about eight feet high on a pile of hay beneath, in which a fork was concealed, the tines being next the floor and the handle slightly projecting above the hay. The fork was a wooden one, such as are generally used in curing hay; the extremity of the handle had been sharpened, but was considerably blunted by being stuck in the ground in the process of hay making; about $1\frac{1}{2}$ inches in diameter, and smooth from being handled.

The point of the fork-handle entered the scrotum about midway and to the right of the raphe, passing obliquely over the left ramus of the os pubis, entered the cavity of the abdomen, and projected in the left hypochondriac region without entirely puncturing the integuments. The distance traversed was about ten inches.

I saw the patient two hours after the accident (7 o'clock P. M.); found him with a small, quick pulse, 120; nausea; frequent though ineffectual attempts to vomit; great pain in the course of the injury, particularly at the point of projection; the hemorrhage, which had been but slight, had entirely ceased.

Hoping that the fork-handle had not penetrated the cavity of the abdomen, but had passed up between the skin and muscles of the abdomen, I was induced to examine the wound. By passing up the forefinger of my right hand and pressing pretty firmly, I could make the point of the finger dip over the pubic bones into the cavity, and distinctly feel the intestines and bladder, so that there could be no error in the diagnosis.

I ordered him $\frac{1}{2}$ gr. morphine; 1 oz. brandy; a warm emollient poultice to abdomen.

16th, 4 o'clock P. M.; found him with considerable fever; pulse 110; rather full; tenderness of abdomen; legs drawn up; has slept some during the night, and passed his urine; no action of bowels; venesec. 16 oz.; continue poultice; $\frac{1}{4}$ gr. morphine at bedtime.

17th, 4 o'clock P. M.; rather less fever; pulse 100, softer; has rested some, passed urine, no action of bowels; some tumefaction over the point of projection in left hypochondrium; continue morphia, and poultice particularly over the point of swelling.

18th. Condition much the same, with the exception that there is now pain and tenderness, and greater tumefaction in the left side; evidently an abscess forming there. Ordered $\frac{1}{2}$ oz. ol. ricini; continue poultice; the morphine to be taken after oil has acted.

19th. Oil acted slightly; took morphine at 10 o'clock P. M., since which time has slept some; indistinct fluctuation in the swelling; begins to point more, but thought it advisable to wait another day before opening abscess; continue poultice and morphine.

20th, 10 o'clock A. M.; opened abscess, from which flowed about an ounce of healthy pus, with some pieces of clothing, which had been carried in on the point of the fork-handle, and, acting as a foreign body, no doubt was the cause of the formation of the abscess.

From this time he improved rapidly, and in three weeks was able to do some light work.

In reviewing this case, I have been struck with two remarkable points in it: First. That so blunt an instrument should have entered so loose a texture as the scrotum, protected by the usual clothing of the season. Yet, when we remember the weight (260 lbs.), and the impetus gained in a descent of eight feet, the occurrence will not appear impossible, as the facts of the case prove. Second. At first thought we would have supposed that the matter of the abscess would have flowed *back* into the cavity of the abdomen through the channel made by the fork-handle.

The reason why this did not occur I think is this: The fork-handle, in passing *obliquely*, produced a *flap-like* orifice in the peritoneum and muscles, and upon its withdrawal the orifice was closed, and kept so by the pressure of viscera—the effusion of lymph permanently closing it before the abscess had fully formed.

CASE IV. *Wound of the abdominal parietes, with immense protrusion of intestines.* By Archibald Blacklock, late surgeon R. N., Dumfries, Scotland. Edinburgh Monthly Med. Journal—Western Lancet, 1852.

While some boys were bathing in the Nith, on Saturday, 10th of April last, one of them, James Wilson, between 9 and 10 years of age, fell upon a broken wash-hand basin, which inflicted a wound in the abdomen, extending from a little below the umbilicus, three inches down the linea alba, or, in other words, nearly to the pubes, through which the greater part of the small intestines, the transverse arch of the colon, and the omentum, immediately protruded. When I first saw him, he had been lying upon the bank of the river upwards of an hour, and the protruded parts, which were chiefly hanging over his left thigh, had evidently been in contact with the ground, for a considerable quantity of sand, withered grass, and other extraneous matters, adhered to them; and, from long exposure to the atmosphere, and fruitless attempts on his own part to force them back into the abdomen, they had become of a deep red color. Twenty minutes more elapsed before a supply of warm water and a sponge could be procured from Nunbunk House, the nearest residence; and the washing of the intestines and mesentery, which was chiefly done by allow-

ing the water to flow over them from the sponge, also occupied a considerable time before they could be replaced, as the poor boy complained, in the most pitiable and distressing manner, when the parts were much touched with it, and occasionally said, in a whisper, "Just kill me." The reduction even was by no means so simple and easy a process as some might suppose; for it frequently happened that patches of sand, etc., which had not previously been observed, were brought into view, as convulsion after convulsion of intestine was about to be replaced, and of course had to be washed off before the operation could be proceeded with. I may therefore safely say, that it was fully an hour and a half from the time that the intestines were immersed in the cold river until they were fairly returned into the abdominal cavity. The whole, however, being replaced, and the omentum spread out, so as to come as much as possible between the intestines and the external wound, the lips of the latter were immediately approximated, and secured in contact by three interrupted sutures, which were afterwards supported by strips of adhesive plaster. The unfortunate boy was now conveyed to his father's house in Dumfries, about a mile from the place where the accident occurred; and three hours after, when reaction had fairly commenced (for, in the first instance, or at least from the time of my arrival, he was pale and almost pulseless, although little or no hemorrhage had taken place), twelve leeches were applied, and a grain and a half of calomel, combined with one-twelfth of a grain of opium, directed to be given every two hours.

April 11, 9 A. M. Has passed a pretty quiet night. Leech-bites bled freely, encouraged by warm fomentation; pulse 124, and of moderate strength and fulness; abdomen is tense, tender, and tympanitic; complains of thirst, and occasionally vomits soon after drinking; has made water twice; twelve more leeches to be applied to the abdomen, and the calomel and opium continued. 1 P. M. Pulse 140; complains of no uneasiness, unless the abdomen is touched; thirst urgent; still occasionally vomits after drinking; the bleeding from the leech-bites has been very copious. 10 P. M. Is much in the same state as at last visit; pulse 144.

12th. Has had another quiet night, and feels quite easy when not moved or meddled with; pulse 122, and of moderate strength; skin comfortably warm and soft; tongue rather moist; thirst, however, continues, and he still vomits the milk and water, which he prefers for drink, but not so often as formerly; urine abundant, and of normal appearance; tension and tenderness of the abdomen have not increased, and the edges of the wound remain in contact. 6 P. M. The tension and tenderness of the abdomen have evidently increased since morning; pulse 124; apply ten leeches, and continue the calomel and opium. 9 P. M. Leech-bites bleeding freely; abdominal tension and tenderness rather less; pulse 122.

13th, 10 A. M. The swelling and tenderness of the abdomen considerably diminished: pulse 114, soft and natural; thirst less; urine copious; gums tender. Calomel and opium to be discontinued; has taken altogether forty-five grains of the former, and two and a half grains of the latter. 9 P. M. Progresses favorably; pulse 104.

14th, 11 A. M. Has had a good night, and says that he feels quite well, and is very hungry; pulse 104, and rather full; thirst moderate; urine still copious, but the bowels have not moved since the accident; had an evacuation, however, shortly before that event. To have a little arrowroot at any time he may wish to have it. 9 P. M. Pulse 94; tongue moist and clean. A suppository of common brown soap to be placed in the rectum.

15th, 10 A. M. Bowels have moved three times since yesterday evening;

evacuations of a healthy character; no discharge from the wound, and the dressing has not been interfered with.

17th, 10 A. M. Removed the plaster and sutures; wound seems well and permanently closed—nicely healed by the first intention, except at one point, where a little of the omentum, not larger than a garden pea, protrudes; touched this with nitras argenti; appetite good. To have beef-tea and bread.

18th. Has had no evacuation from the bowels since the 15th. To have a gruel enema, and to be allowed porridge and milk morning and evening.

19th. The bowels have moved twice since yesterday, when the enema was administered, both evacuations of natural appearance, and well formed. From this period he daily gained strength. On Monday, 5th of May, returned to school; and up to this date continues perfectly well.

CASE V. Wounds of the abdominal parietes, with escape of stomach, colon, and omentum; ineffectual efforts to vomit until after the reduction of the stomach. By M. Lépine, Surgeon to Hospital, France. American Journal Med. Sciences, 1844.

M. Berard read to the French Academy of Medicine, on the 31st of October last, a report on the following case communicated by M. Lépine, Surgeon to the Hospital of Chalons sur-Saône.

A laborer was gored in the abdomen by a bull. One of the wounds extended along the margin of the false ribs, and of the last true one, as far as the xiphoid cartilage, and was eight inches long. The patient was able to return home on foot, a distance of about a hundred feet; on his way he in vain endeavored to vomit. M. Lépine arrived about two hours after the accident, and found that the wound allowed the stomach, enormously distended, to escape, as also the omentum and transverse colon. The stomach appeared strangulated by the wound; some of its veins were swollen to the size of a common quill.

The first thing done by the surgeon was to return the protruded parts. The reduction of the colon was attempted and effected, although with some difficulty, owing to continued nausea. M. Lépine then applied both hands on the larger curvature of the stomach, without being able, however, to circumscribe it entirely, and endeavored, by pressure, to return a portion of the gases which distended the organ. For a long time the efforts made by the patient to vomit, efforts which were repeated at very short intervals, prevented the reduction; as soon as a portion of the stomach had been returned, the spasmodic contraction of the diaphragm and of the abdominal muscles overcame the resistance offered by the hands of the operator, and re-expelled the part. At last, by perseverance and gentle pressure, the reduction of the stomach was accomplished, and that of the omentum soon followed.

During all the time that the stomach was out of the abdomen, M. Lépine neither saw nor felt it contract, although, in order to give rise to contraction, he immersed his hands in cold water previously to placing them on it. The reduction had scarcely been accomplished when, to the nausea and vain efforts to vomit which had existed since the accident, succeeded true vomiting, which relieved the stomach of a quantity of food that the patient had taken half an hour before receiving the wound.

We have not spoken of the other less severe wounds which occupied the abdominal parietes. One of them, nevertheless, is worth noticing; the horn had torn the integument at the level of one of the external inguinal rings, and, following the inguinal canal, penetrated to the peritoneum. The intestines were seen at the bottom of this wound, which presented also to view the spermatic cord, quite denuded.

The margins of the solution of continuity which had allowed the stomach to escape, were brought together by means of the quilled suture; and a fold of linen was placed in the wound of the inguinal region.

The results of the wound were not serious. The patient only experienced slight pains, which gave way after two bleedings; he had scarcely any fever. A slight swelling of the lips of the wound, which supervened forty-eight hours after the operation, obliged M. Lépine to loosen the sutures, which were only definitively withdrawn on the sixteenth day. The wounds were all cicatrized, and the cure was complete, on the twenty-first day. Since then (1825) unto the present time, the patient has remained perfectly well.

CASE VI. *Wound of the abdomen with protrusion of stomach; opening and emptying this organ before reduction could be effected; recovery.* By B. A. Ewing, M. D., of Bayou Sara, Louisiana. *New Orleans Med. and Surg. Journal*, 1853.

The following case, which occurred in my practice last spring, is submitted without comment, with the belief that it may prove interesting to the readers of the *Journal*, as well on account of its rarity as the success which attended the treatment.

I was called in the month of April, 1852, to see a negro man—the property of John E. Hammons, Esq., of Carroll county, Miss.—who, in a rencounter with the owner, received a penetrating wound between the ninth and tenth ribs, at about one-third their length from before. The injury had been inflicted with a common pocket-knife, the blade of which measured about four inches; and upon examination, the base of the left lung was found to have been slightly wounded, which was manifested by the escape of air at each respiratory act; the knife penetrating the diaphragm, its point wounded the omentum; the stomach, however, escaped.

The wound was inflicted at the beginning of the affray, and the subsequent struggling (for he continued to resist afterwards) caused the stomach to protrude through the wound, which was about two inches long and parallel with the ribs. The tumor formed by the protruding stomach was so large, that it could with difficulty be grasped with both hands, and was filled with an undigested breakfast; the accident having occurred about an hour subsequent to that meal.

Upon my arrival, I attempted the reduction of the protruding viscus; but soon found that it could not be accomplished by the use of any justifiable amount of force. In the meantime vomiting supervened, which increased the difficulty still more, by forcing into the tumor an additional amount of its undigested contents.

Having no instruments with me, I was under the necessity of sending five miles for them, which necessarily caused a delay of three hours; by which time there was a strong tendency to strangulation; the vessels of the stomach were turgid and dark, from the obstruction to the free escape of venous blood. I proceeded to enlarge the external wound to the extent of about three inches, which, however, did not enable me to effect reduction, but seemed to relieve, to some extent, the strangulation, by allowing the vessels to empty themselves. The external wound now measured nearly five inches, yet owing to the unyielding nature of its boundaries above and below, I was prevented from replacing the portion of the stomach protruding; and it was deemed advisable, indeed imperatively necessary, to empty it of its contents. Accordingly, in the presence of Doctors Hart and Clarke, an incision was made into the organ sufficiently large (say an inch and a half) to turn out the contents, which, it is

needless to state, were identical with those ejected by vomiting. This opening was made about two inches from the cardiac orifice.

After thus relieving the organ, the necessary care being used to prevent any escape into the peritoneal sac, the wound was then closed by four tightly drawn stitches of the interrupted suture; accurate approximation of the edges of the wound being thereby effected; the organ then being restored, the external wound was likewise closed by a half dozen stitches of the same suture. He was then ordered an enema, and left, to be seen again on the following day; when he was found quiet, and without any constitutional disturbance. All solid food was interdicted, and the bowels ordered to be kept open by enemata, and after the third day there was a gradual but very perceptible improvement, which continued to recovery, in three weeks.

CASE VII. *Transfixing the abdomen with a bayonet.* Association Med. and Surg. Journal, 1854.

A gunner and driver of the Royal Artillery had made an attack upon his sergeant, and inflicted two superficial wounds upon one leg and arm. The culprit then rushed through the barrack-square to escape his pursuers, when the sentry on duty at the gate interposed himself with his carbine, in the attitude of "charge bayonets," to obstruct him. The man, as he was rushing through a narrow passage with an impetus which he could not control in time, threw himself (not premeditatedly it may be observed) with great force upon the bayonet of the sentry, which entered his body an inch to the left of the ensiform cartilage; and passing through the abdomen, emerged by its point to the left of and close to the spinal column some inches lower down. He was seen by Mr. Gallwey two minutes after, and was found sitting quite unconcernedly on a form in the guard-room. The two openings of exit and entrance were apparent, and the bayonet itself was found bent by the violence to which it had been exposed. The man marched in a quarter of an hour afterwards, to the hospital, three-quarters of a mile distant, and at the end of a fortnight was discharged from the same to be placed upon trial for his life. The day after his admission his urine was a little bloody, and subsequently there was general anæsthesia of the walls of the thorax and abdomen, which lasted, however, but for awhile. With these exceptions, the injury was not followed by a symptom; nor did the subject of it require a dose of medicine for his recovery. Mr. Gallwey very justly attributes much of the happy result in this case to the accident having happened before dinner.

SECTION III.

WOUNDS OF THE STOMACH.

CASE I. *Extraordinary recovery from a wounded stomach.*

This occurred in the practice of the late Hon. John Archer, M. D., of Maryland. Medical Repository, 1812.

In the month of June, 1784, immediately after dinner, three men agreed to go and take up a runaway negro man, at that time supposed to be in the barn of the gentleman with whom they then were. They accordingly went: one of them was to go into the barn and search for him amongst some straw, another was placed at the door, and the other stood a small distance off in the course he must go if the others missed apprehending him. Thus placed they conceived they were prepared to take him. Accordingly, the first went into the barn, and in searching for him was attacked by the negro, with a large knife, who made a stroke at him, which he avoided by throwing himself back-

wards. The negro then made for the door, and the man who was placed at the door, observing the knife in his hand, let him pass : but the third man, not seeing the knife, remained at his post, and when the negro came opposite to him, he drove the knife into him with a back-handed stroke. It entered near the cartilages of the false ribs, on the right side, penetrated into the stomach, and passed, nearly transversely, the cartilages on the other side. The external integuments were laid open nearly three inches, about two inches below the cart. xiphoides ; and the stomach more than two inches. The dinner that he had eaten shortly before was in part evacuated at the wound, such as bacon, cabbage, and the cider which he had drank at dinner. The poor man had no surgeon nearer than ten miles, and I lived twenty miles from him. He sent for the nearest, and dispatched a messenger for me likewise. I did not get to see him until the third day about noon, nearly forty-eight hours after he had received the wound. The gentleman at whose house he was did the best he could for him, and an old soldier undertook to sew up the wound and dress it, which he did with an awl, needle, and waxed thread, and in this situation he lay until I came. On inspecting the wound I thought it best to cut all the stitches, and leave it to heal up gradually, which I accordingly did. They were merely in the cutis, and would have broken loose in two days more. I then directed he should lay constantly on his back, and be nourished with strained soups. The wound to be kept clean, and dressed once or twice a day. I visited him again the ninth day. Appearances were favorable ; the wound looked well, and he had no fever worthy of notice. He at this time complained of soreness in his right groin, which on examination appeared swelled, hard, and somewhat inflamed. Apprehending it would suppurate, I ordered poultices to be applied twice a day until I should return. When I came again the swelling in the groin had become soft : I opened it, and a large quantity of good conditioned pus was discharged, with two or three pieces of cabbage, which had passed into the cavity of the abdomen from the wound in his stomach, producing inflammation and consequent suppuration. The wounded man complained more of the swelling in his groin than he did of the wound in his stomach. After this, both wounds healed as fast as could be expected, until they were perfectly well. I have seen him often since. He informed me that he felt no inconvenience in consequence of the wound, only an enlargement after eating or drinking. I have felt the tumor when it appeared about as large as half a goose's egg when cut longitudinally. It felt very soft, and appeared to be little more than a protrusion formed by part of his stomach, which collapsed when it was empty, and was distended in proportion to the quantity he ate or drank ; but from this he felt no pain or uneasiness. He has since removed to the western country, and I have not heard any account of him.

CASE II. *Wound of the stomach, with protrusion ; enlarging the wound to effect reduction ; recovery.* By Charles Wm. Ashby, M.D., of Culpeper C. H., Virginia. Stethoscope, 1851.

A negro boy, six years old, the property of Mr. R. B., fell upon a pair of sheep shears, which he had in his hand, whilst running down a hill. The instrument penetrated the stomach obliquely from above, just grazing the left side of the sternum and edges of the ribs, making a flap-like orifice in the integument.

I was called in consultation by my friend, Dr. P. C. Slaughter, and found nearly the *whole stomach protruded*, and discharging its contents through an *aperture about three-quarters of an inch in length*.

Aware of the controversy which has long existed among able surgeons, on

either side, as to the propriety of stitching the stomach or bowels, the everted edges and gaping appearance of the wound in the stomach made it necessary, I thought that a stitch should be taken. To avoid irritation as much as possible, with the finest needle and silk I ventured to take a single stitch through the middle of the wound.

Before I saw the case, Dr. S. had made some efforts to restore the organ to its natural position, but it did not occur to me at the time that I should have any serious difficulty in replacing it, at least after enlarging the orifice a little. But such was the unruly nature of the boy—his violent screaming and resistance, and the nausea and vomiting which constantly attended the handling of the stomach—that notwithstanding I enlarged the orifice several times to a considerable extent, our best efforts not only failed to restore the organ, but it seemed to protrude the more.

At this juncture, fearing the irritation resulting from further efforts, I suggested the use of chloroform, notwithstanding the necessary delay of having to send several miles for it. Whilst under its influence, I found it necessary again to enlarge the aperture slightly, and then had no further difficulty, although the boy vomited as freely as before from handling the organ.

The wound of the integument was rather ragged in its appearance, and of course a little bruised by our efforts.

The wound of the stomach was brought exactly opposite the tegumentary wound, and gently retained within its verge. A single stitch, patent lint, with cold water and a bandage completed the dressing.

The patient was placed on his side, absolute rest enjoined, and soon afterwards a large dose of opium was administered.

From the time of the accident until the completion of the dressing six hours intervened, and yet the boy retained his strength most remarkably.

Under the influence of the opium our patient rested well the first night.

2d day. This morning the pulse is a little excited, and face flushed—venesection to make a decided impression; and this was repeated twice during the day, and opium after each bleeding; absolute diet enjoined, but the boy desires no food.

3d. The wound had a healthy appearance, but tenderness of the abdomen and tympanites greatly increased our fears as to the result. The pulse feeble and quick; the bowels not moved since the accident.

Turpentine enema and a succession of blisters were ordered, and after the bowels were moved the opium was resumed.

4th. Our patient evidently improved, tympanites and tenderness diminished, pulse more quiet, countenance and general aspect of things more encouraging; takes a little hot water tea this morning, for the first time; gum water and opium continued.

5th. The wound not healed by the first intention; has a dark spot immediately over the wound of the stomach, and is discharging a very offensive sanious matter. A soft poultice, and the same prescription continued.

6th. The ligature came out this morning. The same prescription continued. From this date the boy gradually recovered, without any particular change in the treatment.

CASE III. Wound of the stomach, with a fistulous opening; the well known case of Alexis St. Martin, under the late Dr. Beaumont, U. S. Army.

Alexis St. Martin, who is the subject of these experiments, was a Canadian, of French descent, at the above mentioned time about 18 years of age, of good constitution, robust and healthy. He had been engaged in the service

of the American Fur Company, as a voyageur, and was accidentally wounded by the discharge of a musket, on the 6th of June, 1822.

The charge, consisting of powder and duck shot, was received in the left side of the youth, he being at a distance of not more than one yard from the muzzle of the gun. The contents entered posteriorly, and in an oblique direction, forwards and inwards, literally blowing off integuments and muscles of the size of a man's hand, fracturing and carrying away the anterior half of the sixth rib, fracturing the fifth, lacerating the lower portion of the left lobe of the lungs, the diaphragm, and perforating the stomach.

The whole mass of materials forced from the musket, together with fragments of clothing and pieces of fractured ribs, were driven into the muscles and cavity of the chest.

I saw him in twenty-five or thirty minutes after the accident occurred, and on examination, found a portion of the lung, as large as a turkey's egg, protruding through the external wound, lacerated and burnt; and immediately below this, another protrusion, which on further examination, proved to be a portion of the stomach, lacerated through all its coats, and pouring out the food he had taken for his breakfast, through an orifice large enough to admit the forefinger.

In attempting to return the protruded portion of the lung, I was prevented by the sharp point of the fractured rib, over which it had caught by its membranes; but by raising it with my finger and clipping off the point of the rib, I was able to return it into its proper cavity, though it could not be retained there, on account of the incessant efforts to cough.

The projecting portion of the stomach was nearly as large as that of the lung. It passed through the lacerated diaphragm and external wound, mingling the food with the bloody mucus blown from the lungs.

After cleansing the wound from the charge and other extraneous matter, and replacing the stomach and lung as far as practicable, I applied the carbonated fermenting poultice, and kept the surrounding parts constantly wet with a lotion of muriate of ammonia and vinegar; and gave internally the aq. acet. am. with camphor in liberal quantities.

Under this treatment, a strong reaction took place in about twenty-four hours, accompanied with high arterial excitement, fever, and marked symptoms of inflammation of the lining membranes of the chest and abdomen, great difficulty of breathing, and distressing cough.

He was bled to the amount of eighteen or twenty ounces, and took a cathartic. The bleeding reduced the arterial action, and gave relief. The cathartic had no effect, as it escaped from the stomach through the wound.

On the 5th day, a partial sloughing of the integuments and muscles took place. Some of the protruded portions of the lung, and lacerated parts of the stomach, also sloughed, and left a perforation into the stomach, plainly to be seen, large enough to admit the whole length of my forefinger into its cavity; and also a passage into the chest, half as large as my fist, exposing to view a part of the lung, and permitting a free escape of air and bloody mucus at every respiration.

A violent fever continued for ten days, running into a typhoid type, and the wound became very fetid.

On the eleventh day, a more extensive sloughing took place, the febrile symptoms subsided, and the whole surface of the wound assumed a healthy and granulating appearance.

For seventeen days, all that entered his stomach by the œsophagus, soon passed out through the wound; and the only way of sustaining him was by means of nutritious injections per anum, until compresses and adhesive straps

could be applied so as to retain his food. During this period no alvine evacuations could be obtained, although cathartic injections were given, and various other means were adopted to promote them.

In a few days after, firm dressings were applied, and the contents of the stomach retained, the bowels became gradually excited, and, with the aid of cathartic injections, a very hard, black, fetid stool was procured, followed by several similar ones; after which the bowels became quite regular, and continued so.

The cataplasms were continued until the sloughing was completed, and the granulating process fully established; and were afterwards occasionally resorted to, when the wound became ill conditioned. The aq. acet. am. with camphor was also continued for several weeks, in proportion to the febrile symptoms, and the fetid condition of the wound.

No sickness, nor unusual irritation of the stomach, nor even the slightest nausea, was manifest during the whole time; and after the fourth week, the appetite became good, digestion regular, the alvine evacuations natural, and all the functions of the system perfect and healthy.

By the adhesion of the sides of the protruded portions of the stomach to the pleura costalis and the external wound, a free exit was afforded to the contents of that organ, and effusion into the abdominal cavity was thereby prevented.

Cicatrization and contraction of the external wound commenced on the fifth week; the stomach became more firmly attached to the pleura and intercostals, by its external coats; but showed not the least disposition to close its orifice; this (the orifice) terminated as if by a natural boundary, and left the perforation, resembling, in all but a sphincter, the natural anus, with a slight prolapsus.

Whenever the wound was dressed, the contents of the stomach would flow out, in proportion to the quantity recently taken. If the stomach happened to be empty, or nearly so, a partial inversion would take place, unless prevented by the application of the finger. Frequently in consequence of the derangement of the dressing, the inverted part would be found of the size of a hen's egg. No difficulty, however, was experienced in reducing it by gentle pressure with the finger, or a sponge wet with cold water, neither of which produced the least pain.

In the seventh week, exfoliation of the ribs, and a separation of their cartilaginous ends, began to take place.

The sixth rib was denuded of its periosteum for about two inches from the fractured part, so that I was obliged to amputate it about three or four inches from its articulation with the spine. This I accomplished by dissecting back the muscles, securing the intercostal artery, and sawing off the bone with a very fine narrow saw, made for the purpose, introduced between the ribs, without injury to the neighboring parts. Healthy granulations soon appeared, and formed soundly over the amputated end. About half the inferior edge of the fifth rib exfoliated and separated from its cartilage.

After the removal of these pieces of bone, I attempted to contract the wound and close the perforation of the stomach, by gradually drawing the edges together with adhesive straps, laid on in a radiated form.

The circumference of the external wound was at least twelve inches, and the orifice in the stomach nearly in the centre, two inches below the left nipple, on a line drawn from this to the point of the left ilium.

To retain his food and drinks I kept a compress and tent of lint, fitted to the shape and size of the perforation, and confined there by adhesive straps.

After trying all the means in my power for eight or ten months to close

the orifice, by exciting adhesive inflammation in the lips of the wound, without the least appearance of success, I gave it up as impracticable in any other way than that of incising and bringing them together by sutures; an operation to which the patient would not submit.

By the sloughing of the injured portion of the lung, a cavity was left as large as a common sized teacup, from which continued a copious discharge of pus for three months, when it became filled with healthy granulations, firmly adhering to the pleura, and soundly cicatrized over that part of the wound.

Four months after the injury was received, an abscess formed about two inches below the wound, nearly over the cartilaginous ends of the first and second false ribs, very painful and extremely sore, producing violent symptomatic fever. On the application of an emollient poultice it pointed externally. It was then laid open to the extent of three inches, and several shot and pieces of wad extracted. After which a gum-elastic bougie could be introduced three or four inches in the longitudinal direction of the ribs towards the spine. Great pain and soreness extended from the opening of the abscess, along the track of the cartilaginous ends of the false ribs, to the spine, with a copious discharge from the sinus.

In five or six days there came away a cartilage, one inch in length. In six or seven days more, another, an inch and a half long; and in about the same length of time, a third, two inches long, were discharged. And they continued to come away every five or six days, until *five* were discharged from the same opening, the last three inches in length. They were all entire, and evidently separated from the false ribs.

The discharge, pain, and irritation, during the four or five weeks these cartilages were working out, greatly reduced the strength of the patient, produced a general febrile habit, and stopped the healing process of the original wound.

Directly after the discharge of the last cartilage, inflammation commenced over the lower end of the sternum, which, by the usual applications, terminated in a few days in a large abscess, and from which, by laying it open two inches, I extracted another cartilage, three inches in length. The inflammation then abated; and in a day or two another piece came away, and the discharge subsided.

To support the patient under all these debilitating circumstances, I administered wine, with diluted muriatic acid, and thirty or forty drops of the tincture of assafetida, three times a day; which appeared to produce the desired effect, and very much improved the condition of the wound.

On the third of January, 1823, I extracted another cartilage from the opening over the sternum, an inch and a half long; and on the fourth, another, two inches and a half in length, an inch broad at one end, and narrowing to less than half an inch at the other. This must have been the ensiform cartilage of the sternum. After this the sinus closed, and there was no return of inflammation.

From the month of April, 1823, at which time he had so far recovered as to be able to walk about and do light work, enjoying his usual good appetite and digestion, he continued with me, rapidly regaining his health and strength.

By the 6th of June, 1823, one year from the time of the accident, the injured parts were all sound and firmly cicatrized, with the exception of the aperture in the stomach and side. This continued much in the same situation as it was six weeks after the wound was received. The perforation was about two and a half inches in circumference, and the food and drinks constantly exuded, unless prevented by a tent, compress, and bandage.

From this time he continued gradually to improve in health and strength, and the newly formed integuments over the wound became firmer and firmer. At the point where the lacerated edges of the muscular coat of the stomach and intercostal muscles met and united with the cutis vera, the *cuticle* of the external surface and the *mucous membrane* of the stomach approached each other very nearly. They did not unite, like those of the lips, nose, etc., but left an intermediate marginal space, of appreciable breadth, completely surrounding the aperture. The space is about a line wide; and the cutis and nervous papillæ are unprotected, as sensible and irritable as a blistered surface abraded of the cuticle. This condition of the aperture still continues, and constitutes the principal and almost only cause of pain or distress experienced from the continuance of the aperture, the introduction of instruments, etc. in the experiments, or the exudation of fluids from the gastric cavity.

Frequent dressings with soft compresses and bandages, were necessarily applied, to relieve his suffering and retain his food and drinks, until the winter of 1823-4. At this time a small fold or doubling of the coats of the stomach appeared, forming at the superior margin of the orifice, slightly protruding, and increasing till it filled the aperture, so as to supersede the necessity for the compress and bandage for retaining the contents of the stomach. This valvular formation adapted itself to the accidental orifice, so as completely to prevent the efflux of the gastric contents when the stomach was full, but was easily depressed with the finger.

In the spring of 1824 he had perfectly recovered his natural health and strength; the aperture remained; and the surrounding wound was firmly cicatrized to its edges.

CASE IV. *Recovery from wound of the stomach.* American Journal Med. Sciences, 1839.

The following "case of recovery from a wound in the stomach," related in a recent No. of a contemporary (*Western Journ. Med. and Phys. Sciences*, April, 1838), is almost enough to make one a believer in destiny. The recovery from the wound is sufficiently surprising, but recovery after such treatment as the patient was subjected to, is nothing short of miraculous. We give the case in the words of the narrator:—

An Indian received a stab in Natchez, on the 24th December, 1837. Six days elapsed before I saw him, during which period he walked to Rodney, which is thirty miles from Natchez. On the 30th of December I visited him, and found, upon examination, a wound four inches long, a little below and to the left of the scrobiculus cordis. Protruding from the wound, there presented a tumor, which, upon first view, I thought was a portion of the bowels; but upon further inspection, I discovered that it was most probably omentum. The external surface of this mass was very vascular, and in a state of suppuration. There was so strong a demonstration of sphacelus in the tumor, that I determined upon its removal by ligature. Accordingly the ligature was drawn pretty tight about the tumor, close to the abdomen. In a short time after the application of the ligature I returned and found him very ill; incessant vomiting, small, rapid pulse, cold and clammy skin, indicating the necessity of removing the ligature. The knife was then resorted to for the removal of the protruding mass; but upon cutting into it, I found that a portion of the stomach constituted a part of the tumor. I carefully separated the already dead parts of the tumor from that which was not in a state of gangrene. In doing so, I had to remove a portion of the stomach. The stomach was secured by a ligature, and confined within the lips of the external wound. The wound was then stitched and dressed with adhesive plaster.

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On the 31st, I found him prostrated, with cold skin, feeble pulse, nausea, and constipated bowels. The external wound, and that portion of the stomach which was perceptible through the wound, were considerably inflamed, but of a healthy aspect. Ordered him a solution of Epsom salts, with spirits nit. dulc. and tinct. opii camph.

January 1. Some fever to-day, with nausea; his bowels were opened by the solution which he took yesterday. The external wound is suppurating. The edges of the wounded stomach very red, with slight suppuration.

2d. Free suppuration from the wound—appearances of granulation upon the thickened edges of the wounded stomach.

On the 5th of January, the ligature which secured the stomach came away. There is a firm adhesion of the stomach to the peritoneum along the wound.

10th. The wound in the integuments nearly closed by granulations. He is recovering rapidly; appetite is good, and bowels regular. On the 15th of January, he rose from his bed, the wound being almost entirely cicatrized; his appetite, digestion, and other functions of nutritive, as well as of animal life, in a normal state.

SECTION IV.

WOUNDS OF THE INTESTINES.

CASE I. *Gunshot wound of the abdomen; the ball passed per anum.* Hennen's Principles of Military Surgery.

Sergeant P. M. received a ball in the belly on the evening of the 18th of June, 1815, which struck him "upon the right side, about one inch below the navel, and three fingers'-breadth to one side. Scarcely a tinge of blood followed the wound. He did not fall, but walked about fifty yards to the rear, from whence, in half an hour, he was carried to a large barn in the village, where he remained for three days before he was conveyed to a hospital at Brussels. During this period he was bled three times *ad deliquium*. The first vein was opened about twenty-four hours after the receipt of the wound. On his arrival at Brussels his principal complaint was incessant straining at stool, for which he received daily clysters. On the sixth day from the receipt of the wound, immediately after an enema, he had an urgent call to the close stool, when he passed a small-sized rifle musket-ball, enveloped in mucus, and unaltered in shape, except a small groove indented in it, probably from cutting along the bayonet or ramrod of the piece from which it was fired. The wound was perfectly healed on the 26th of August following, without any ill accident or uncommon occurrence from the time of receiving it, except that during the course of the first night he was sensible of a sort of watery oozing that moistened the linen placed on his wound, particularly whenever he drank, which he frequently did. This circumstance he was never afterwards sensible of. He joined his corps at Paris, but had not been more than ten weeks there, when severe pain again arose in the bowels; some bits of cloth were passed by stools, an abscess formed externally; and every symptom threatened approaching peritonitis, which was relieved by active means, under the charge of Staff-Surgeon Dease." In the following year he was seen: "his general health was good, but if he indulged in a full meal, he felt severe pain in the part. He was subject to obstinate costiveness; and if he allowed the bowels to remain for any length of time in that state, the pain produced in the abdominal region, and particularly in the wounded part, became very severe indeed. The motion of his limbs gave him no pain, although for some time after receiving the wound he was obliged to bend his body in walking, and he performed that

movement with considerable uneasiness; but if he stooped or drew in his breath forcibly, he experienced very severe pain. In all other respects, his general health and appearance were in as good a state as before the receipt of the injury."

CASE II. *Gunshot wound of the intestine; gravel stones passed per anum; recovery.* By John Neill, M. D., Prof. of Surgery in the Pennsylvania Medical College. Medical Examiner, 1854.

Instances of gunshot wounds of the intestines, in which the ball was passed per anum, are so rarely reported, that Hennen, Guthrie, South in his translation of Chelius, and other writers on the subject, refer to the same case, that of Sergeant Matthews, who not only passed a ball but also a portion of the waistband of his breeches. The following case is somewhat similar.

Michael Kelley, aged 14, of sanguine temperament and good constitution, was received in the Hospital July 30th, 1853, at 5½ o'clock P. M., with a wound of the abdomen on the left side, about two inches above the anterior superior spinous process of the ilium. He stated that he was playing with a pistol loaded with four or five gravel stones, and in attempting to cock it, it was discharged and the contents received into the abdomen. The muzzle of the fire-arm was about two inches from the abdomen at the time of the discharge. The accident happened at Bristol, twenty miles from the city, at 12 o'clock on the day of his admission. The wound was dressed by a physician of that place, and a gravel stone was removed from the wound by him. The wound was two inches long and half an inch wide, much burned and blackened by the explosion; and filling up the orifice of the wound, was a small black knuckle of intestine. The different layers of the wall of the abdomen were separated from each other around the wound, and from between the peritoneum and fascia transversalis, I removed a gravel stone about the size of a pea. Pulse 90; skin warm and moist; tongue natural; no anxiety of countenance, or restlessness; complains of no pain on pressure about the wound; tendency to drowsiness; face slightly flushed. Edges of the wound supported by adhesive strips, dressed with wet lint. The body and thighs approximated. Ordered hydrarg. chlorid. mit. ¼ gr., opii. gr. ¼ every hour. An enema of tinct. opii, gtt. xl., every two hours until patient sleeps.

Ten o'clock, P. M. Pulse 100, skin bathed in perspiration, face much flushed, not sleeping yet. Repeated the injection of tinct. opii, gtt. xl.; ordered calomel gr. ¼, pulv. ipcc. et opii gr. iv. every hour during the night, and the injection of tinct. opii gtt. xl. every two hours until patient sleeps. No nourishment but a tablespoonful of iced barley water every half hour.

July 31. Slept about three hours last night. Pulse 90, soft and full, skin warm and moist, face not much flushed, complains of slight pain about the wound, which was not dressed. Treatment continued. 7 o'clock P. M.—same condition, and is freely narcotized; bladder paralyzed, used the catheter. Opium suspended.

August 1. Slept well all night, feels much better, has no pain. Pulse 100, soft and full, skin warm and moist, face slightly flushed, tongue coated with white fur and moist. Renewed the Dover's powder and calomel. 7 o'clock P. M.—pulse 97 and small, skin natural, tongue coated with white fur and moist, complains of no pain, slight tympanites, slight nausea, bladder still paralyzed, used the catheter. Suspended the Dover's powder and ordered calomel gr. ¼, opium ¼, every two hours, and enema of tinct. opii gtt. xl. at bedtime. Hot fomentations to the abdomen.

August 2. Did not rest well last night, slept about two hours. Pulse 100 and small, skin warm and moist, tongue white, furred and moist, no pain or

tympanites, slightly ptyalized. He passed during the night five grumous and bloody discharges, one containing a *gravel stone* about the size of a large pea, which was the first evidence of a wound of his bowel. Suspended his calomel and ordered tinct. opii, gtt. x. every two hours, unless he sleeps; hot fomentation to the abdomen, barley water as diet. Passed his urine last night and this morning without assistance. 7 o'clock, P. M.—pulse 88, full and soft, skin and tongue natural. Surface of abdomen concave, no pain in the belly on pressure. Patient says he feels very well; ordered an enema of tinct. opii, gtt. xl. at bedtime.

August 3. Pulse 84, full and soft, skin and tongue natural, no pain or tympanites, slept well during the last night. Bowels moved this morning, the discharge grumous and contained another gravel stone. Dressed the wound for the first time. The slough beginning to separate, some pain around the edges of the wound and effusion of fibrin about it. Dressed the wound with wet lint and adhesive strips; ordered tinct. opii, gtt. x. every two hours. Hot fomentation to abdomen and barley water diet. 7 o'clock, P. M.—same condition as this morning; ordered an enema of tinct. opii, gtt. xl. at bedtime.

August 4. Slept well all last night. Pulse 82, full and soft; tongue and skin natural; no pain or tympanites; local effusion of fibrin around the wound, extending to a diameter of four inches. Dressed the wound with wet lint; slough entirely separated. Suspended tinct. opii, ordered simply barley water diet. 6 o'clock, P. M.—same condition; ordered enema of tinct. opii, gtt. xl. at bedtime.

August 7. Has continued to improve. The discharge from the wound has been sanious until to-day. The pus is now more laudable, and a gravel stone of the same size as the two passed per anum was found in the discharge from the wound. The enemata of laudanum discontinued.

After this time, the wound gradually filled up and contracted, his bowels were naturally moved, and he was discharged perfectly well on September 19th.

CASE III. *Successful section of a portion of the colon.* By M. Reybard, of France. *Lancet*, 1844.

M. Jobert de Lamballe read the report of a committee composed of himself, M. Berard, and M. Blandin, named by the Academy, in March, to examine the details of this case, and to witness a series of experiments which M. Reybard proposed to perform on animals, in order to substantiate his views. M. Reybard's case was that of a young man named Joseph Valernaud, whom he was called upon to attend in April, 1833. Valernaud was then twenty-eight years of age, and had been suffering several years, but more especially during the six preceding months. The principal symptoms were acute and frequent colics, accompanied by lancinating pains in the left hypogastric region, which increased every day. In the left iliac fossa M. Reybard found, on examination, a hard tumor, of the size of an ordinary apple, deeply situated, movable underneath the fingers, evidently not adhering to the abdominal parietes. The abdomen was much distended with flatus, and the course of the colon was distinctly perceptible underneath the skin. The patient had retained his appetite; he had eructations. The stools were rare, no gas escaped from the anus, but there was a continued discharge of a sanguinolent puriform secretion, the emission of which was accompanied by tenesmus. Enemata, even when the quantity of fluid injected was small, were retained with difficulty. On examining by the rectum no tumor was perceived. The patient had lost flesh, had every day shivering fits, and did not sleep. Three months previously a quantity of pus had passed away from the anus, and since then the local pain had diminished, although the general symptoms had increased. M. Reybard, concluding that the tumor was a

cancerous affection of the sigmoid flexure of the colon, and that it must necessarily prove fatal if left to itself, determined on extirpating it. The operation was performed on the 2d of May, in the following manner:—

The patient lying on his back, M. Reybard made an incision, six inches in length, above the anterior and superior spinous process of the ilium, parallel to the crista, but one inch from it, dividing the tissues layer by layer. Ligatures were placed on the arterial vessels as they were opened. The peritoneum was cautiously opened in an extent of three inches. The tumor was drawn to the external opening, although with considerable difficulty. Two ligatures were placed on the meso-colon, in order to prevent hemorrhage. The intestine was then extirpated to the extent of about three inches, and the mesocolon was cut with seissors. The arteries which bordered the cut intestine were tied, and the threads were kept long, in order to be introduced into the cavity of the intestine on the two ends being united. Before the suture was commenced M. Reybard prepared two needles, each of which was armed with a thin double silk thread. To the end of the thread of one of these needles, instead of a knot, there was a small roll of lint, of the size of a pin's head. Both threads were greased with cerate. The ends of the intestine having been approximated, they were first joined near their mesenteric edge, and the thread fixed by a knot so as to leave the small roll of lint in the intestine. The glover's suture was then commenced and carried to the middle of the intestine, the spirals being made very near together. The thread was cut off seven or eight lines from the intestine, and the end fixed by being comprised in the spirals formed by the second thread. The entire circumference of the intestine having been thus sewed by a double thread, the latter was separated, one end was passed through the peritoneal coat only, and then the two having been joined by a double knot, they were cut close to the intestine. The suture thus accomplished, the intestine was returned deeply into the abdominal cavity, and the wound of the parietes of the abdomen was united by three sutures. The patient kept the thigh flexed on the pelvis, and the body was inclined slightly forwards and to the left. The general treatment consisted merely in an emollient regimen. Nothing particular occurred until the fifth day after the operation. The abdomen then became distended and painful, and the lips of the abdominal wound separated to the extent of six lines. Leeches and poultices were applied and enemata administered. On the seventh day the patient was better; there had been no stool. On the tenth day the sutures of the abdominal parietes were taken away, and an enema having been administered, an abundant evacuation followed. It was not examined. The abdomen was no longer painful. Thirty-eight days after the operation he was taking solid food, the bowels were regularly open, and he emitted gases by the anus; the wound, also, was completely cicatrized.

It was only six months afterwards that he began to feel slight lancinating pains, with a sensation of uneasiness in the left iliac region. Soon, however, the pains became more violent; the tumor returned, accompanied by great sensibility of the corresponding leg and thigh. He kept his bed for two months, and died on the 16th of March, 1834, not quite a year after the operation. The body was not opened. M. Reybard states that the extirpated tumor was "as large as a small apple, hard, of a grayish-white color. It presented several tubercles, more distinct to the touch than to the eye, and occupied the two posterior thirds of the diameter of the intestine. The cavity of the intestine had lost half of its extent." He could not present it to the academy, having lost it. Unfortunately, said M. Jobert, the case was incomplete. The description of the tumor was so imperfect that it appeared difficult to say whether it was a cancerous formation or not. The body, also,

not having been opened, it was impossible to make any accurate surmise as to what had taken place between the two ends of the intestine after the suture, and how the union and permeability of the intestine had been accomplished. The case, however, was valuable, inasmuch as it was a well-authenticated instance of union of the intestinal canal taking place after three inches of its length had been extirpated for severe disease.

SECTION V.

INTESTINAL OBSTRUCTION.

CASE I. *A worm and tooth discharged by the opening of an abscess in the right iliac region.* By John Archer, M. D., of Maryland.

This is dated November, 1808, and published in the *New York Medical Repository*, under the title "An inflammation, apparently of the ovarium, ending in suppuration, and discharging a living worm and well-shaped tooth." To account for the facts presented by the author, we venture the opinion that the abscess probably arose from the tooth lodging in the intestine, in all probability in or about the cæcum, and that the ovarium was not, therefore, the site of the affection.

Mrs. A. B. about five years ago was taken in labor and delivered of a son. Nothing happened during the labor more than common in such cases, and for a few days after continued as well as usual, when she complained of pain and soreness in the region of the pubes, especially between the pubes and right ilium. The complaint increasing, she sent for me, and on examination I felt a deep-seated induration, that I conceived to be an enlargement of the right ovarium. I ordered emollient baths and poultices, with weak solution of saccharum saturni mixed in the poultices, and an alterative use of mercury. This was continued for some time, without any abatement of the complaint; the tumor gradually increased in size, extending from the pubes to the ilium and upward into the umbilical region. In about three weeks there was evidently (in my opinion) a fluctuation of matter; I therefore advised that the tumor should be opened. This advice was at first opposed by Mrs. A. B., conceiving it to be dangerous; but when informed that it would be more dangerous to delay the operation, she in two or three days consented that the operation should be performed, and I opened the tumor with an abscess lancet; but not until I had introduced the lancet near two inches, before it entered into the cavity of the tumor. It then discharged freely a large quantity of good conditioned matter. For several weeks it was dressed daily, and lint introduced to keep the incision open. After some time the discharge gradually lessened, but the ulcer did not heal up entirely, frequently discharging small quantities. At length, in about a year after the commencement of the tumor, the end of a *worm* protruded at the orifice and was extracted. It was about eight or nine inches long, and appeared to be like a lumbricus, and was alive. From this time the discharge abated, and at times stopped for three or four days, sometimes for a week, and then discharged small quantities; and when evacuated the orifice closed as before, for about a week or ten days, and discharged again. In this manner it continued for a year, when on examination there was perceptibly to be felt, with a probe, a hard substance just within the orifice, which I supposed to be an exfoliated part of some one of the adjacent bones. This substance was immediately extracted, and when washed, to my great surprise appeared to be like a *tooth*, resembling a dens sapientiae: the upper part is enamelled and the upper end or crown is indented, similar to indentations of a tooth that has no opposite tooth; the lower part

or root does not appear as if it was inserted into a bony alveolus, but had a fleshy attachment; the lowest end has an aperture that enters into the cavity of the tooth, for the passage of an artery, etc., similar to apertures in other teeth, but larger. After this hard bony substance was extracted, the orifice healed, and has remained in a sound state for the last three years. Within the last two months, she complains of a little soreness in the same place, and on examination there was to be felt a hardness about the size of a nutmeg, deep seated, and when pressed it is sore. I have ordered the part to be daily rubbed with an ointment made of stramonium, and weekly to take mercury and a purge. I hope there are no more worms and teeth to make their appearance. I would further observe, that Mrs. A. B. has had no more children, and probably will not, as I suppose the remaining ova were destroyed by the inflammation.

CASE II. *Accumulation of small bones in the cæcum and colon, producing mortification.* By M. N. Phillips, M. D., of Belmont, Mississippi. Memphis Medical Recorder, 1855.

The subject of this report was a negro woman, aged about twenty-five or thirty years. She first complained of pain in the bowels in the spring of 1853. This pain was attended by a rumbling noise, showing the existence of flatus in the bowels; at the same time there could be felt near the umbilicus, but generally on the left side, a hard substance; its shape at one time would appear almost round, like a ball, and at other times would seem to be several inches in length, and about the thickness of a distended colon. The pain, rumbling noise, and spasmodic condition of the bowel, would continue a few minutes and then cease. On some days these attacks would come on several times, but other days they would not be perceptible at all. For the most part, they caused so little disturbance of the system, that the woman was able to do good work for the greater portion of six months. During this time no special treatment was pursued, and but little attention was paid to her situation; for she suffered but little inconvenience from these attacks. Some time in December, about eight months from the first attack, Dr. Ellis, of this place, in company with myself, examined her. We had no difficulty in ascertaining that there was a fluid in the abdomen, and in producing fluctuation, which we supposed to be in the peritoneal cavity. We therefore pronounced it a case of ascites, and she was treated accordingly. But the cause of the hard substance, or its pathological nature, was not so plain; nor could we come to any satisfactory conclusion about it, but supposed it to be a spasmodic condition of the colon. Under the treatment for dropsy, the woman improved for three or four months. The quantity of water was much lessened, and the fluctuation less perceptible; and the spasmodic condition of the bowel, and the rumbling noise that generally accompanied it, were less frequent and less perceptible. The same treatment was continued for about two months longer, but no benefit seemed to attend it. Slight fever then set up, and the pain gradually increased, which seemed to be mostly in the left iliac region. From this time on she was treated for inflammation of the bowels, but she grew worse all the time, and for three weeks previous to her death the pain was intense in both iliac regions, but the rumbling sound could not be heard, nor could the hard substance be felt. She died on the tenth of August, and was examined about twelve hours afterwards, by Drs. Moore, Ellis, and myself. Upon laying open the abdomen, and dissecting out the intestines, the colon was found to contain a great quantity of *small bones*. The bowel was filled with them for several inches at two different points, namely in the cæcum and a portion of the ascending colon, and also in the iliac colon, or sigmoid

flexure. The portions of the bowel where these bones were lodged were in a state of mortification; some of the bones had even passed out of the bowel, through its gangrenous parietes; the mortification on the left side extending as high as the splenic flexure of the colon. There was some unnatural adhesion of the peritoneum to the walls of the abdomen; but no destruction, or mortification, except in those parts covering the gangrenous bowel.

CASE III. *Occlusion above the ileo-cæcal valve, with communication between the ileum and rectum.* By S. O. Griffin, M. D., of Rhode Island. Boston Med. and Surg. Journal, 1855.

Thursday evening, Nov. 9, I was called to see Joseph Legg, æt. 10, of slender constitution. He had been sick three days, but had had no medical treatment. Upon examination, I found a hard tumor, three by four inches in extent, in the right iliac region, near the ileo-cæcal union. This was quite tender to the touch. No tenderness of the bowels except in this region. Bowels regular, tongue slightly coated, pulse 110. On close examination I could detect no difficulty except at the point above referred to. Gave sub. mur. hyd. gr. v; ol. ric. ʒss.

Friday, Nov. 10. I found the cathartic had acted, producing a copious watery evacuation, with but little fecal matter. The tumor still existed, and was somewhat painful. Ol. ricini was again given, and pulv. Dov. to relieve the pain.

Saturday, 11th. I found the oil had produced free fecal evacuations, but no diminution in the size of the tumor. Laxatives and anodynes were ordered.

Sunday, my patient was more comfortable. Bowels open, tongue cleaning, pulse less than 100, and the tumor less tender and painful. Laxatives and anodynes were continued in diminished doses.

Sunday evening I was called in haste to see the boy. Found him greatly prostrated; extremities cold; cold perspiration on the face; respiration hurried; pulse 120, and almost imperceptible; delirious; constantly spitting up a frothy substance, with clots of blood; deglutition very difficult; abdomen somewhat swollen and tender, especially over the tumor, and everything indicating a speedy dissolution. Was told that he had, an hour previously, vomited a large amount—a pint at least—of black bloody matter, of a fecal odor and appearance. Perforation was suspected; and as death was hourly looked for, but little save palliatives was given.

To my surprise I found that my patient was living on Monday, and that he had rallied a little from the prostration of the previous evening. Symptoms of general peritoneal inflammation began to appear. Gave pulv. ip. comp. and sub. mur. hyd. in small doses. Injections occasionally, and oil when it could be retained.

Tuesday, Nov. 14. Met Dr. Smith, of Chepachet (at whose suggestion I report the case). Found the patient more comfortable. Had rallied from the prostration of Sunday night. General peritoneal inflammation of a severe type, however, was present. Emp. vesic. was applied over the region of the tumor; the anodyne and alterative continued; enemata frequently used, and castor oil given when it could be retained by the stomach. As these (the enemata and oil) afforded no relief, but rather aggravated the symptoms, they were omitted and the patient confined to opiates, alteratives and counter-irritants.

He remained much the same till Wednesday, Nov. 22. During these eight days, the bowels were very much swollen, the whole abdomen exceedingly tender, the right lumbar, right iliac, hypogastric, and left iliac regions

being dull, the left lumbar and umbilical resonant. Nausea and retching were constant; blood and stercoraceous matter occasionally vomited. He had no evacuation of the bowels from Sunday, Nov. 12, till Wednesday, Nov. 22. On the latter day he had a dejection, and another in the night, which greatly relieved him. Laxatives and anodynes in amount sufficient to keep the bowels open and control the pain, were now given, under the use of which he seemed to improve for five days. Swelling of the bowels mostly passed off, but the tumor in right iliac region remained, and was the seat of the most intense pain just before and during defecation. His stools now became more frequent and dark colored, very fetid, and mixed with blood and pus, always preceded and attended by the most excruciating pain in the right iliac and hypogastric regions. They continued to grow more and more frequent, more purulent and fetid, and his strength gradually to fail, till December 12th, when he died. *The tumor in the right iliac region had entirely disappeared before death.*

I have purposely omitted further particulars in the history of the symptoms and treatment, as they would unduly prolong these notes without adding to the interest of the case, since my chief object is to report the appearances revealed by a post-mortem examination.

Autopsy, eight hours after death.—Present, Drs. Smith, of Chepachet, and Wever, of Paseoag, with several residents of the place. Nothing peculiar in external appearance. Abdomen only examined. On opening the cavity, found evidences of general peritoneal inflammation. Strong adhesions and small purulent deposits throughout the whole cavity. Adhesions of the intestines so firm as to require the scalpel to separate them. Firm adhesions between the bowels and abdominal walls commenced two inches above the crest of the ilium, extending to the median line, down to the brim of the pelvis, across the hypogastric region, and involved a part of the left iliac. On dissecting up the abdominal parietes, six inches of the ileum, the cæcum, lower half of the ascending colon, and sigmoid flexure, seemed to form a single inseparable mass, confined by continuous adventitious bands and membrane. In dissecting near the ileo-cæcal communication, to separate the mass, a cavity was cut into containing a small amount of pus and fecal matter. In exploring this, it was found to communicate with other smaller ones, extending over the right iliac and hypogastric regions, *also that it made its way above into the ileum, two inches from the ileo-cæcal valve, and extended down into the cavity of the pelvis, where it perforated the coats of the rectum, through which its contents had been discharged.* Through this cavity a direct communication existed between the ileum and rectum. There was complete occlusion of the ileo-cæcal communication, and the cæcum was so collapsed and contracted that it had no appearance of ever having been a cæcum. Aside from this locality, the abdominal viscera presented no appearance not usually met with in ordinary cases of peritoneal inflammation.

CASE IV. *Obstruction in the bowels from a small piece of bone in the ileum, causing death.* By E. D. Fenner, M. D., Prof. of Practice in the Medical School of New Orleans. Med. Register and Gazette, 1852.

A few weeks since I was requested by Dr. Moss, of this city, to assist him in the post-mortem examination of a mulatto man aged about 35 years, who, after suffering repeated attacks of obstruction of the bowels, accompanied by great pain and stercoraceous vomiting, finally sank and died. He had suffered three attacks within the month previous to death. Dr. M. had attended him in several of them, and only succeeded in relieving him with great difficulty by means of free cupping, the warm bath, and croton oil. These means suc-

ceeded in opening his bowels in his last attack, but he did not recuperate afterwards. On examination after death, we found a *small piece of bone* lodged in the lower portion of the ileum. It had excited inflammation and *thickening of the intestinal walls* to such extent as to cause an almost impermeable stricture of the canal. Here was the cause of death. The piece of bone was only about *three-fourths of an inch in length*, and rather flat. The ends were not sharp, and the only wonder is, that it had not passed without difficulty.

Now let us see how much larger an amount of foreign substance did pass the entire extent of the alimentary canal, till it reached the anus, where it was impeded by the sphincter, and had to be removed mechanically:—

CASE V. *Obstruction in the bowels from large pieces of cork, in a child.* By Dr. Fenner, of the New Orleans Medical School. New Orleans Med. Register and Gazette, 1852.

On the 11th of September, 1852, I was called to see a white female child, aged about two and a half years. I was told that she had diarrhœa with prolapsus of the rectum. No assignable cause was mentioned at the time. About three months previously, I had attended this child for an obstinate attack of diarrhœa, and relieved her entirely.

On this morning the child did not appear to be much sick. I advised a little hydrag. c. creta, to be followed by a dose of castor oil. A few hours afterwards I was sent for, and informed that a piece of cork had been discovered in the child's anus. Upon reaching the patient, I found this to be the case; a large piece of cork was plainly visible. I readily succeeded in removing it with my finger; but this was not all. I continued to take away piece after piece, until I removed *nearly a handful*. The operation gave considerable pain, and caused slight hemorrhage, but I removed all I could reach. I then prescribed a dose of castor oil, which produced a copious operation, and gave complete *relief*. A considerable quantity of cork came away some days afterwards. We were then informed by a larger sister of this child, that she had often observed her with cork in her mouth, but did not know that she had swallowed it. Thus it is evident that this large amount of *cork*, some of the pieces as big as the end of my thumb, had been swallowed, and traversed the alimentary canal as low as the anus. There were, perhaps, a dozen pieces, twice as large as the piece of bone that caused the death of the man first mentioned. The quantity of cork passed completely filled a common match-box.

CASE VI. *Death from intestinal obstruction, caused by water-melon seeds.* By B. Rohrer, M. D., of Germantown, Pennsylvania. American Journ. Med. Sciences, 1855.

Major W., of Columbia, Penna., a man of strong and robust constitution, blessed with digestive organs of great power, was addicted to drinking, and being a natural gormandizer, he would swallow anything placed before him, regardless of the consequences. Fish in particular, a favorite dish of his, he would devour bones and all. During the months of May and June, 1852, he frequently hailed me in the street, stating that he had violent cutting pains in his bowels, but as there was no constitutional disturbance, I simply directed him to take a dose of oil. A few weeks after this he presented me with the cause of all his troubles; he said he felt something working gradually lower and lower down in the rectum, until at last he could reach it with his fingers and remove it. It was a thin hard bone, one inch in length, and three-quarters of an inch in width; its edge slightly serrated, and very sharp; whilst it was passing along the rectum, he had frequent discharges of blood; it was supposed to be the side bone of the head of a catfish.

On the 12th of September, upon my return to the office, I found a message from the major. I immediately called, but was informed that he had been complaining all the morning of colic, and had just left in the train of cars, to visit his niece some distance in the country. I heard nothing more of him until the 22d, when I was requested to visit him with Dr. Jones, of Bainbridge. When we arrived, he was delirious, muttering to-himself. Pulse frequent, irregular, small and wiry; abdomen much distended, and tense as a drum; vomiting a vitiated mucus, commixed with bile; extremities cold; death soon followed. Had no evacuations from the 12th up to his death, although all the usual means had been employed.

Post-mortem, thirty-six hours after death.—Abdominal cavity containing a quantity of offensive gas and fecal matter. Gangrene of the ileum near the ileo-cæcal valve, containing 20 water-melon seeds, with the slippery surface destroyed, and adhering firmly to each other, making a strong ball. Also, gangrene of the sigmoid flexure, containing over 100 seeds, forming an exceedingly hard ball.

CASE VII. *A large intestinal concretion.* London Med. Times—Medical Examiner, 1845.

At a meeting of the Sheffield Medical Society, Mr. Reedal exhibited a portion of the colon, and also a concretion of feculent matter, taken from the body of a man who died after a few days' illness, suffering with symptoms of ileus. Many years ago, he had taken, by mistake, an ounce of carbonate of potash, which made him very ill for some time, and shortly afterwards he perceived a tumor in the left iliac region, which was treated for hernia. On one occasion, having suffered from constipation, he was removed some distance in a cart, by the jolting of which it appeared as if something had been removed, as the bowels were freely opened. On examination, after death, the ascending colon was found to be very much distended and thickened, and when opened, presented the appearance of inflammation with ulceration of the mucous lining. In the cæcum was found the concretion, which weighed four ounces, and measured six inches in circumference. On a section being made, it was found to be composed of feculent matter, in concentric layers of a light brown color; externally it was dark, nearly approaching to black.

CASE VIII. *Intestinal obstruction overcome by yeast.* By Daniel Barber, M. D., of New Richmond, Ohio. Western Lancet, 1852.

The subject was a young man aged 20 years. He had two attacks of colic within ten days. Constipation followed immediately upon the last. He was treated for four days with purgatives, warm water injections, bleeding, etc., without any effect. At the end of this time (Nov. 13) I was called in consultation with Dr. Bennett, of Withamsville, the attending physician. I found the case as follows: Pulse 120, abdomen tympanitic, and tender to the touch, extremely severe paroxysmal pain of the bowels, frequent vomiting of highly offensive matter, obstinate constipation.

To subdue the tendency to peritoneal inflammation, we repeated the bleeding and administered the sulphate of morphine, in half grain doses every two hours until he was brought fully under its influence. When I returned on the evening of the 14th, the pulse had fallen to 96—the tenderness and pain of the bowels were materially diminished—the vomiting less frequent and distressing—constipation continued. Frequent and large quantities of warm water have been continued to be injected. At my suggestion the following plan of treatment was now adopted.

We procured a small quantity of brewers' yeast, from which was prepared

in the usual way a quantity sufficient for our purposes. At about midnight, we gave a tumbler half full, and ordered the same quantity to be repeated once or twice every hour.

On the afternoon of the 15th, when it was obvious from the quantity taken and retained, that the intestines above the obstruction were distended with carbonic acid gas, the colon was likewise inflated with atmosphere by means of a pair of fire bellows.

By these means combined, the intestinal canal throughout its whole course was inflated, and the obstruction reduced.

At nine o'clock in the evening a copious evacuation of the bowels ensued, followed by several others during the night. At the same time the explosions of gas were so violent as to be heard at some distance from the house—it was literally keeping up a regular fire. The patient was at once relieved, and speedily recovered his former health. Besides the distending force of the gas, it is very probable that it exercises a beneficial influence by its sedative and antiseptic properties.

I believe this practice originated with the French, but to what extent it has been applied I know not. Dr. Johnston and Rogers of this place, have given yeast in two or three cases of this disease during the course of their practice here, with success. In one case relief was afforded on the fourteenth day of the attack, after every other means had been tried and failed.

From the above facts I should feel disposed to give this plan a trial in every case, where the ordinary means fail. Should relief not be obtained in a reasonable length of time, and the case be protracted, and as it were hopeless, a moderate exhibition of the yeast, by its antiseptic properties and by gently exciting the peristaltic action, would afford perhaps the best prospects of success.

CASE IX. Obstruction in the colon relieved by an opening made in the groin. By Mr. James Luke, of the London Hospital. London Med. Times and Gazette, 1851.

The subject of this report was a man, aged sixty, who, on the 16th of Dec., 1850, first complained to the author of feeling generally unwell. He had no pain, but his countenance was depressed, his eyes sallow, and his tongue coated. The bowels were confined, and latterly medicines had acted with difficulty on them. An aperient was ordered, and on the following day he had a small lumpy motion, but without relief to the symptoms. Castor oil was ordered, but after a time was rejected by vomiting. On the 18th there was no relief from the bowels, and he vomited everything he took. From this time he progressively got worse, in spite of all the means resorted to for his relief. He complained of pain chiefly about the region of the cæcum. The transverse arch of the colon could be felt distended and tympanitic. A careful observation of the case had led the author to believe that there was obstruction of the bowel about the sigmoid flexure of the colon, and it was resolved, as a last resource, to operate upon the patient. The operation was performed on the 23d. Not thinking it prudent to assume that the conclusion respecting the seat of the obstruction was certainly correct, the author determined to adopt that operation which would give him some opportunity of extending his search, provided he did not find the obstruction at the point where it was supposed to be. He therefore opened the abdominal parietes near the groin, by an incision four inches in length, a little to the outside of the course of the epigastric artery, the lower extremity of which incision terminated a little above Poupart's ligament. The peritoneum was opened to the extent of about two inches. On passing the finger

down the surface of the intestine, which now protruded, a diseased mass could be felt, which appeared to encircle the intestine. The bowel was then opened above this part; a large quantity of feculent matter came away, and the patient expressed himself as relieved. On now passing the finger into the bowel it was found to be impervious about two inches below the aperture.

After the operation the recovery of the patient was rapid. On the second day feces passed per anum, and continued to do so for more than a month, when their passage through the natural opening ceased; it was again partially restored, but from this time the greater part of the feces passed by the wound. It is closed by a well-fitted pad, and he has been enabled since to pursue his ordinary occupation almost without interruption.

CASE X. Strangulation of forty-two inches of the large, and nine inches in one portion and seven in another, of the small intestines, through an opening in the mesentery. By John T. Metcalfe, M. D., Professor of Practice of Medicine in the University of New York. *New York Medical Times*, 1852.

Thomas Armstrong entered the Bellevue Hospital with symptoms of strangulation, or invaginated bowel, of which he died, on the day following his admission.

Autopsy, 11 hours after death.

On opening the abdominal cavity there was an escape of gas, and of hugely distended intestines, some of which were dark red, some bright red, and others having a blackened gangrenous appearance. The latter consisted of forty-one inches of the large intestine, commencing eight or ten inches above the anus, which had been strangulated by passing through an old opening, two inches in diameter, in the mesentery, near its attached border. Through the same aperture were strangulated two loops of small intestine, one nine inches in length, the other seven, presenting the different hues of red, above mentioned. The edge of the orifice through which the bowels had passed, was smooth, thickened, and well defined; evidently of a date much anterior to the fatal attack. The colon contained a large quantity of bloody, grumous fluid, in which were found a great many pieces of undigested calf's head. In the peritoneal sac, were ten ounces of sero-sanguinolent fluid.

CASE XI. Intestinal obstruction from an immense quantity of raw wheat. By J. L. McCarthy, M. D., of Macroom.

On Thursday, the 8th instant, I was sent for to visit John Leary, ætat. 35, living at Toames, three miles from hence, a steward in charge of a farm belonging to a gentleman of the name of Penrose. I found the man in bed, laboring under the most agonizing pains, which he referred to the anus, rectum, and loins. He was bathed in sweat; his countenance expressed the greatest anxiety, but he suffered no headache nor delirium. His tongue was coated with a thick white fur, but moist; there was no affection of the chest or of the respiratory faculties, nor any complaint of the stomach, but he had much thirst, urgent desire to urinate and evacuate the rectum, without ability to effect either. The abdomen felt quite soft on pressure, except over the pubic and left iliac regions, where distension of the bladder, the sigmoid flexure of the colon, and the rectum, could plainly be perceived.

On making an examination per anum, I found its verge considerably swollen and inflamed, with great contraction of the sphincters, and so tender and irritable, that it was with much difficulty that the patient would allow me to proceed with the examination. He said he had been ill during the last three days; that during the first and second days of his attack, he only felt occasional fits of pain in the anus and loins, but that for the last sixteen

hours, or thereabouts, he was in extreme agony, with but occasional slight intermissions. He had not had an anal evacuation for the last four days, and from ten o'clock P. M. on the previous evening had not passed any urine up to the time when I saw him, which was one o'clock P. M. on the following day. He said to me, that being for some time previous to his illness, superintending the thrashing out of a large quantity of Mr. Penrose's wheat, he had, as was often his habit, eaten some of the grain as he proceeded, and to that he attributed his illness. He went on the second day of his illness to the Macroom Dispensary, where he was ordered a dose of castor oil, but no effect followed its exhibition.

Having by mistake omitted to bring a catheter with me, I sent home for one, and in the mean time proceeded to examine the rectum internally. With considerable difficulty I introduced my little finger, well oiled, into that cavity, and found it extremely distended. It was, in fact, completely blocked up with a hard mass of *undigested wheat*. The agony which the patient suffered from this exploration, forced me to desist for a short time, when I determined on attempting to extract some of the wheat from the bowel. I accordingly procured a small egg spoon, and having well oiled the handle, introduced it into the rectum, and detached and brought away from the mass about two ounces of semi-masticated wheat. By this means I obtained a little more room, so that I was enabled to force into the rectum a few small pieces of mutton suet, which I allowed to remain until they had melted. This had the effect of lubricating the part and softening the contents of the cavity; so that on a second attempt with the spoon-handle I succeeded in clearing out about ten ounces more of the wheat; the patient all the time complained of almost intolerable suffering. Having desisted for a time in order to allow him some rest, he felt an urgent desire to go to stool, but the attempt was unsuccessful, owing to the tenderness and constriction of the anus. He was, however, able to urinate, and voided about two and a half pounds of fluid.

On making my next examination, I found that the attempts to evacuate the bowels had brought down more of the wheat into the rectum, which was again filled to distension, but the mass was not so hard as in the first instance; and on again operating I succeeded in removing about twenty ounces more. The patient expressed himself as much relieved. I had by this time in all brought away about *two pounds of wheat*.

As I found his pulse full, quick, and bounding, I bled him to ℥xxv , when he became faint. I then had the rectum stuped for about an hour, and gave him a draught containing an ounce of castor oil, fifty drops of tincture of henbane, and an ounce of cinnamon water. Half an hour afterwards an enema was administered, followed by a purgative draught. Six hours afterwards, I found him free from pain, and in a sound sleep. His bowels had been much affected by the enema and medicines, and an *immense quantity of wheat*, with some white starchy stuff, had passed from his bowels. The anus continued tender for a few days, but by keeping the bowels soluble with small doses of magnesian salts, he perfectly recovered.

CASE XII. *Strangulation of the intestine by a diverticulum intestini*. By Dr. Levick, of Philadelphia. Western Journ. Med. and Surg., 1853.

E. W., dentist, æt. 30, had been subject from infancy to attacks of colic, which were generally relieved by vomiting. For a long time before his illness he had been constive, his bowels being moved only by injections of cold water. During the last week of his life, he had been scarcely free at any time from griping pains.

He partook of a cold dinner on the 29th, four hours after which he was

seized with vomiting, which continuing Dr. Kite was sent for. He found him suffering great pain and ejecting from his stomach everything taken into it.

Sinapisms and fomentations were applied to the epigastrium, and the patient was placed in a warm bath, but without any appreciable benefit. Opiate injections were the only means employed that afforded any relief. To overcome the obstruction which was believed to exist, five quarts of tepid water were slowly and carefully injected into the bowel.

The vomiting continued with but slight intermission, and the patient died on the following morning at 8 o'clock.

The preceding history of the case was furnished by Dr. Kite, who with Dr. Remington had charge of the patient.

The examination was made by Dr. Levick, December 29, in the presence of Drs. Kite, Remington, and Davis, fifteen hours after death.

Autopsy. Exterior.—Rigidity complete; much lividity of the body; face discolored by an offensive dark-colored fluid which had escaped from the mouth; abdomen tympanitic; odor of decomposition very great.

Interior.—The *abdomen* alone was closely examined. The small intestines were of a dark purple hue, and full of gas.

The *cæcum* full of gas, lifted entirely out of the iliac fossa, and having the appendix vermiformis lying loosely upon it. A little below and to the right side of the umbilicus, there was found a digital band firmly adherent by one extremity to the parietes of the abdomen. Upon examination, this was found to be a cæcal sac or diverticulum coming off from the ileum at a distance (when the intestine was stretched out) of about two feet from the ileo-cæcal valve, and of a size, at its connection with the intestine, sufficient to admit the little finger; having the same structure and investments as the intestine. This completely encircled the gut, having produced strangulation and gangrene.

CASE XIII. *Ninety-two shot and one hundred and twenty plum-stones found in the ileum.* Gazette Médicale de Paris—North American Archives of Med. and Surg. Science, 1835, vol. ii.

Læmi, aged 32, entered the Hôtel Dieu on the 12th of January, 1833. He had been ill for a month, and complained of pains in the belly; he had constant nausea and frequent vomiting; by the rectum, he was only able to pass a small quantity of liquid matter, and that after considerable efforts.

The pulse is natural, as is also the respiration; the tongue is healthy, the epigastrium free from pain; there is a dull sound in the centre of the abdomen; the stools are liquid and yellow. These symptoms, added to the emaciation, originated a belief in the existence of an affection of the mesenteric glands and vessels. The patient remained in this condition a fortnight; the vomiting ceased, but the state of the abdomen and of the stools was the same.

He left the hospital on the 2d of February, and in three days again entered. There was then observed in the right iliac region, and approaching the umbilicus, a middle-sized, unequal tumor, which moved under the hand. This circumstance rather tended to confirm the former diagnosis, and no doubt was now entertained of the existence of a tuberculous affection of the mesenteric glands. (Ioduretted ointment was rubbed upon the abdomen, iodine given internally, and emollient clysters administered.) On the 10th of February, the tumor was treble the size it had been the night before; was hard, but less mobile than before; handling caused pain in it. The difficulty of passing a stool was extreme. The 15th; sensibility over the whole abdomen is very great; the hand applied over the tumor is insupportable; there is vomiting, small and rapid pulse, contracted features; the patient is in a state of utter fear and anxiety, and raves about shots and death; he might have been considered de-

lirious, but in other respects he gave every evidence of sound intellect. The following morning the peritonitis had acquired a high degree of intensity; the patient had not a moment of quietude. He died in the course of the day.

Dissection, twenty-six hours after death.—From 15 to 18 ounces of reddish fluid are in the peritoneal sac; recently-formed false membranes, and all the usual marks of peritoneal inflammation. The small intestine is enormously dilated, whilst the colon and rectum are diminished. At the junction of the ileum with the cæcum, a sac as large as the head of a foetus is found thrown towards the umbilicus, and covered with the mass of the small intestines. Adhesions, some old, others recent, keep it fixed to the posterior surface of the abdomen, the mesentery, and some intestinal folds. The parietes of this sac are thick and of a brown color; on opening it, 120 plum-stones and 92 shot are seen. The stones are black, and as it were macerated in the liquid matters in which they float; in other respects they are unchanged, and contain each a fresh kernel. The shot, of size No. 2, are also blackened, and were here and there depressed. There are also some cherry stones. The sac in which they are contained is continuous with the ileum, and seems to be formed at the expense of the latter. The ileo-cæcal valve, which corresponded to the right and lower portion of the sac, was almost entirely obliterated, and only exhibited a very small perforation through which liquid matters alone could pass. The mesenteric glands were perfectly healthy, and none of the other organs had any morbid appearances.

CASE XIV. *Survivance for forty-two days after the expulsion of forty-four inches of intestines.* American Journal Med. Sciences, 1846.

This remarkable case is recorded by Mr. Hill in the *Monthly Journal of Medical Science* for August last. The subject of it was a lady sixty-five years of age, who had been long in delicate health and a sufferer from constipation. Whilst on a visit to her friends she neglected the use of laxatives. She became constipated on the 18th of August. This was followed after eight days by severe pain in the abdomen, tympanites, the rejection of every kind of food, etc. The constipation persisted in spite of medicine until the 31st of August, when she had several copious and very offensive motions, which relieved tenderness of abdomen, etc. Diarrhœa succeeded, and on the 5th of September Mr. H. was sent for in consequence of something protruding from the rectum. On examination, Mr. H. found a shrivelled substance about four inches long hanging down and attached to something soft within the sphincter. Gentle and continued traction brought away a portion of the entire intestine, which, with what had been protruded, measured forty-four inches;—it was so decayed as to taint the whole apartment with its putrid odor. The tendency to diarrhœa continued for ten days after this, but was kept in check by opiate enemata. A little food was taken with relish, and the patient complained only of debility; she became extremely emaciated, and on the 14th of October, forty days after the separation of the portion of intestine, she sank exhausted.

On examination, the intestines were traced from the stomach downwards, and found healthy onwards to the colon, which, from the left iliac region upwards to the lower rib, had formed strong adhesions to all the neighboring parts; it was dark and fragile at its lower part. A large cavity was formed, on a line with and above the os ilium, by adhesions; it was full of feculent matter; the upper part of the rectum and the lower portion of the colon opened into this cavity. The sigmoid flexure was wholly wanting; and the colon, from the caput cæci to its termination in the cavity, as above described, measured only fourteen inches.

"In this highly interesting case," Mr. Hill remarks, "involution of the bowels must have taken place, leading to amputation and throwing off of the sigmoid flexure. The adhesions formed a strongly walled cavity, which prevented the escape of feculent matter into the general cavity of the abdomen. The ingesta had traversed the intestines in the natural way, and, first filling completely the cavity described, had then forced their way down through the rectum. This is obviously the explanation of the motions being latterly so regular and so apparently natural."

CASE XV. *Strangulation of the ileum in an aperture in the mesentery.* Lancet, 1846.

The subject of this case was a lady, aged twenty-four. When in the eighth month of pregnancy, she was seized with severe pain in the belly, of an intermitting character, with sickness and vomiting. She thought labor was coming on; but there was no dilatation of the os uteri. The symptoms throughout her illness were those usually arising from some mechanical obstruction in the bowels, and in spite of all the remedies employed, they continued, with more or less severity, until her death, which took place on the fourth day.

An examination of the body was made twenty-four hours after death, and the morbid appearances are fully detailed. On examining the preparation which was on the table, the vermiform appendix is found inclosed within a double layer of peritoneum, which forms a kind of broad ligament, that is attached above to the cæcum and ileum, and externally and inferiorly to the iliac fossa and brim of the pelvis. On the outer side of the vermiform appendix there is an aperture in this membrane with defined edges, through which the thumb can be passed; and behind the portion of it, which extends with a curve from the appendix to the ileum, there is a pouch, into which a finger can be passed for about two inches. The thin membrane passing across from the vermiform appendix to the ileum, and leaving the aperture through which the aperture took place, forms an extension of the above-named curve.

CASE XVI. *Strangulated intestine from adhesion of the appendix vermiformis to the uterus.* By L. B. Sheffey, M. D., of Huntsville, Alabama. Southern Med. and Surg. Journal, 1849.

This was a case of a negro woman of this place, to whom Dr. Erskine and myself were called on the 3d of August. We found her laboring under symptoms of colic, with which she had been attacked the day previous; we failed by the use of anodynes, the most active cathartics and stimulating injections in giving her any relief from pain, or in producing an action upon her bowels. The pain was confined to the umbilical region. In the progress of the attack there was considerable tympanitic distension, inverted peristaltic action, and stercoraceous vomiting towards the termination. The persisting constipation, twisting pain in the abdomen, tympanitic swelling and stercoraceous vomiting, caused us to pronounce it a case either of intussusception, or twisting of the intestine. She died on the evening of the 5th.

Upon opening the abdomen, we found that an adhesion had, at some time previous to the attack, been formed between the floating extremity of the appendix vermiformis and the fundus of the womb, thus making a loop, through which a portion, about a yard in length, of the small intestine had found its way and become incarcerated. The presumption is, that this adhesion was of considerable standing, as the womb was found much thickened and of cartilaginous hardness, indicating chronic disease of some standing, though no period could be referred to by her owners when she had had an attack sufficient to bring about this state of things.

SECTION VI.

INTUSSUSCEPTION.

CASE I. *Intussusception of the entire colon in an infant.* By John B. Ormsby, M. D., of Corinth, Vermont. • Boston Med. and Surg. Journal, 1852.

May 6. I was called to the child of Mr. A. T., a female, aged ten months. I found her suffering from what I supposed to be prolapsus ani. A tumor protruded, of a smooth, red appearance, about four inches in length. I found no difficulty in returning it, but found that it originated much further within the sphincter than I had been aware of. I pushed it up above the promontory of the sacrum, but it returned when the finger was withdrawn. The bowels were not distended, and I now found in the left iliac region a tumor which seemed movable, hard, and about the size of a goose's egg. A cathartic of castor oil operated kindly. The tenesmus and distress could only be relieved by opiates. Her stomach soon became irritable. She became emaciated, and on the 22d day of May sank.

A *post-mortem examination*, twenty-four hours after death, revealed the following condition of the bowels. Two or three ounces of a dirty, fetid fluid was found in the cavity of the peritoneum. The peritoneum, below the umbilicus, was much injected, and covered with what appeared to be coagulable lymph. The tumor, before noticed, proved to be the entire colon invaginated. By taking hold of the ileum, I was enabled to draw it out nearly to its original length, when I found that it was the caput coli which had passed through the anus. There were two places in the track of the colon which appeared in a gangrenous state, being easily broken down.

CASE II. *Unusual form of intussusception of the colon.* Dublin Medical Press, 1845.

Dr. Harrison said he would briefly detail to the society the particulars of a very unusual case: he had himself never met a similar one, nor had any of the authorities alluded to an exactly parallel occurrence. Some time since, Dr. Gason, of Euniskerry, a gentleman extremely well informed in his profession, had sent the patient to him, who was then much emaciated, and with a countenance expressive of great suffering and distress, such as is observed in internal malignant diseases. Vomiting was so incessant that the patient could hardly speak. On examination, a tumor, about the size of an orange, was found near the umbilicus, between it and the ribs of the left side; it could be moved up and down, and was free from pain at times, except on pressure. He was much in doubt about the nature of this tumor, but formed a conjecture that it was a malignant growth from the omentum between the colon and stomach. He saw that it could not be an aneurism, and its situation was too low to induce him to suppose the disease was connected with either the liver, spleen, or stomach. He would not enter into a detail of the various remedies employed, all of which completely failed to give the slightest relief. The poor man was at times very free from suffering, but at other times he would scream out and say—"Kill me, or cut me open!" The only medicine that at all benefited him was opium, which he continued to take till his death.

On *examination* of the abdomen after death, very little appearance of disease presented itself at first. There was no general inflammation of the peritoneum or of the omentum; but on raising up the latter structure, and examining the

colon, an intussusception of this intestine was seen to have taken place, the descending portion of it being carried up to the transverse arch, probably for an extent of three or four inches. The transverse arch being laid open, Doctor Harrison exhibited the lower portion of intestine lying in the upper, with its orifice resembling an os uteri projecting into a dilated vagina; this contracted appearance of the orifice might, he thought, in some degree, account for the violence of the pain that had been suffered. The intussuscepted portion of the intestine was found in an ulcerated condition, accounting for the unhealthy discharges that had existed during life. Here was a very remarkable form of intussusception totally unlike those usually seen. When Hunter, in speaking of the affection, observes that such an occurrence is possible, he talks of the two species of the disease—the one progressive, in which the invagination may go on increasing from above downwards—the other, the retrograde form, the lower portion of the tube being received into the upper, as in the case under consideration; however, he gives no example of this occurrence. Sir Everard Home mentions one case of the retrograde species in the small intestines—a point in which the present case possessed additional interest, for the intussusception was here situated in the colon, while the small intestines or the cæcum are the parts usually involved. Cruveilhier had never met with this form of the disease, and gives no plate representing the affection. Various opinions respecting the nature of the case were entertained, not one who saw it having diagnosed it, except indeed Dr. Law, who, when he first examined the patient, at once observed that he knew of nothing it resembled so strongly as intussusception. For himself, he must confess he had not for a moment formed such an opinion. No remedy is known for the disease; the boasted one of the ancients, metallic mercury being found to be as inefficacious as the rest; purgatives given by the mouth can effect nothing.

CASE III. *Intussusception of the caput coli through the ascending, transverse, and descending colon, dragging the ileum after it to the rectum.* By James R. Wellman, M. D., of Fitchburg, Massachusetts. Boston Medical and Surgical Journal, 1856.

L. S., aged six months: parents healthy. This child had always been well, until some three or four weeks previous to its last sickness, when it suffered somewhat for a fortnight with diarrhoea, but recovered, having received domestic treatment only.

On the 13th of April, it awoke in the morning in apparent good health, nursed, had a dejection, and its usual morning nap. About 10 o'clock A. M., it was suddenly seized with severe pain, which seemed referable to the abdomen. It suffered intensely for some time. About 5 P. M., there was a discharge of blood from the bowels.

I saw it for the first time on the following morning, April 14th. It lay in a state of partial stupor, from which, however, it could be easily aroused; it was very pale, not seemingly in much pain; pulse frequent, but no other febrile symptoms. There had been frequent dejections of a bloody mucus during the night, attended with some distress; also occasional vomiting of bilious looking matters. A tumor was discovered on the left side of the abdomen, along the course of the descending colon. Calined magnesia, in small and repeated doses, was advised, till the vomiting ceased; then castor oil, enemata, and friction, with stimulants to abdomen externally.

15th. Dr. A. Hitchcock was called in consultation. The vomiting had ceased after a few doses of magnesia and three or four doses of oil had been taken; there had been no dejection of a fecal nature, but the cloths were occasionally stained with bloody mucus. Patient weaker. An enema was

given, through a gum-elastic tube, which had been introduced some ten inches, but it came away immediately. The diagnosis was now, invagination of the intestine. Remedies proved of no avail, the patient continuing to sink, until about 2 o'clock P. M. of the 16th, when it died.

Autopsy.—On opening the abdomen, it was found that the caput coli had passed into, and through, the ascending, transverse and descending colon, dragging the ileum after it, and was just entering the rectum. It was so thoroughly drawn in and impacted, that the abnormal mass, before removal, seemed only six or eight inches in length; but when removed and reduced, it actually measured thirty-three inches. All the other organs seemed healthy.

A very remarkable feature in the case was the absence of pain after the commencement of the attack, with the exception of some slight distress at the time of passing the bloody mucus. A well-defined tumor occurring suddenly in a child who had previously no organic disease; absence of febrile symptoms, and obstinate obstruction of the bowels, were among the more prominent symptoms which led to the given diagnosis.

CASE IV. *Intussusception, in which one yard and three inches of the ileum was removed.* Lanect, 1825, vol. ix.

A woman about the middle period of life, had been for some time laboring under a constipation of the bowels, and she in consequence sent for her medical attendant, who on the second day of his visiting her, had his attention directed to a slight protrusion which had taken place *per anum*. From the appearance which it presented on a superficial examination, he was induced to think it was a portion of the rectum, and as no particular swelling of the parts had as yet supervened, the tumor was readily returned.

The constipation, however, continued, and within a day or two she was seized with severe symptoms of peritoneal inflammation; there was pain over the abdomen, accompanied with a continual state of nausea and sickness, so that every kind of nourishment that was taken was instantly rejected. Just about this time a protrusion again recurred, and to a greater extent than at the former period; this induced the surgeon more minutely to examine the condition of the parts, for which purpose he very gently withdrew a small portion, and finding it yield very readily, he continued in this manner gradually withdrawing the gut, until *one yard and three inches of intestine* were brought away, and when the last portion was removed no additional force was employed. The violent and distressing symptoms which had previously harassed and tormented the patient, now, in great measure, subsided; still, however, pain was complained of in the abdominal region, and there was an occasional recurrence of nausea and sickness. A dose of castor oil was given the patient by the attendant surgeon, and to his great surprise he had the satisfaction to find on visiting her the next day that the bowels had acted for the first time since the commencement of the attack. On examining the evacuation, it was found to present the appearance of a healthy and natural secretion. Small doses of sulphate of magnesia in mint water, were occasionally administered, and in a very short time the nausea and sickness subsided. The patient went on progressively improving till the eighth day, at which time the bowels had acted three or four times, and the general state of the patient was such as to induce a favorable prognosis of the case to be given.

To use the metaphorical language of John Hunter, however, "Nature took the alarm; conscious of her inability to sustain the extensive injury that had taken place, she gave up the contest;" and at the moment when the patient appeared to be going on favorably, life ceased.

Mr. Stanley assisted in examining the body, which we need not say was done in a most careful manner. It was found that the detached intestine was a portion of the ileum which had become intussuscepted (if we might be allowed to use such an expression), within the colon; violent straining, attendant on the distressing symptoms under which the patient labored, had in all probability greatly facilitated the descent of the gut. And that it did not arise from the force which was used in extracting it, is abundantly proved from the circumstance that the solution of continuity was discoverable. An inflammatory action had taken place about the caecum coli, which had occasioned an effusion of lymph, thus completely agglutinating the two portions of intestine together; and from this agglutinated part had the separated portion of intestine been detached. The ileo-colic valve was entire. The mucous coat of the transverse arch of the colon was found to be in an inflamed state, and in two or three places small ulcerated spots were discoverable. The peritoneum was also inflamed, but not in a very remarkable degree.

The portion of gut which had been removed, was brought to the museum by Mr. Stanley, who showed it to the pupils the following Saturday. There can be no doubt as to its being intestine, since the valvulæ conniventes were very apparent, and moreover the coats of the intestine were divided, and shown. The valvulæ conniventes, as is usual, were found to be more numerous towards that portion which was nearest the jejunum.

Mr. Langstaff and Mr. Welbank, with several other respectable surgeons, and we believe Dr. Latham also, have seen the preparation, and it is unnecessary to say they are all thoroughly convinced of the fact of its being a portion of gut.

CASE V. Intussusception with separation of five inches of intestine, followed by complete recovery. By John Fox, Esq. *Lancet*, 1838, vol. xxxvi.

Henry Diment, æt. 16, residing in the parish of Nether Cerne, was taken ill on the morning of Monday, September the 10th. I first saw him at four in the afternoon. On inquiry, I found he had felt a little uneasiness in his bowels on the preceding day, with a slight sense of chilliness, and had taken a little milk and water, with a small quantity of bread in it, instead of his usual more substantial breakfast; that he had eaten some nuts on the 8th, but had, prior to the 9th, enjoyed an excellent state of health. He had passed a restless night, and had suffered from dull pain about the navel for a minute or two several times in an hour; had taken several ounces of castor oil without effect; bowels had not been opened for 24 hours. The tongue was slightly coated, but moist; he had no thirst; pulse 82, soft, and a little irregular; skin natural; urine of pale straw color, and passed without inconvenience. The abdomen appeared somewhat tumid, but the pain, which he described as a "dull, griping pain," was diminished by steady pressure. I prescribed five grains of calomel and one grain of opium, to be taken immediately, and half an ounce of castor oil every four hours, until the bowels had been freely opened.

Sept. 11, seven A. M. He has passed a sleepless, restless night; the same kind of pain continues about the umbilicus, not increased on pressure; thirst more urgent; has rejected every dose of the oil; pulse 96, small and intermitting, but soft and easily compressible; skin rather perspiring; tongue moist and white; urine natural; no anxiety of countenance; slight fulness of abdomen; to take two grains of calomel, and eight of compound extract of colocynth, every four hours, until relieved, and with each dose of the pills a saline aperient in a state of effervescence, and if the pain and constipation continued, to be put into a hot bath for twenty minutes in the afternoon.

Eight P. M. Worse; skin hot; pulse 102, intermits every six or seven beats; face slightly flushed, but countenance not anxious; medicine and everything else taken during the day immediately rejected; was free from pain whilst in the bath, and dozed a little for half an hour afterwards. I examined the abdomen again; it was not more tumid; and I could not detect any unnatural fulness in any part, but firm pressure around the navel produced uneasiness; the pain had been constant for several hours, but more violent at intervals; there was no hernia; twelve leeches were ordered to the abdomen, to be followed by warm fomentations with sealded bran; a common purgative injection to be administered, and the hot bath to be repeated if necessary; and a pill containing one drop of croton oil every two hours.

12th. He has passed a sleepless night; pain almost constant, and very severe at intervals; slight pain is also felt on pressure over the epigastrium; sickness continues; everything taken immediately rejected; belly rather more tumid; it appears somewhat fuller and harder about the centre of the *right iliac* region than on the opposite side; pulse 104, small, but soft, intermits every fourth or fifth stroke; urine rather scanty, otherwise natural; skin hot; tongue white, but moist, and there is little thirst; a blister, containing two grains of muriate of morphia, ordered to the epigastrium; the hot bath and injection to be repeated, as well as the pills, should the stomach be more disposed to retain them; a little soda water to be also given.

13th. The hot bath had been used twice during the preceding day and night, with temporary relief to his sufferings; several injections had also been given, but they had been retained a few minutes only, and then returned unstained with feculent matter. The blister, with the morphia, appeared to have had a very beneficial effect on the stomach, as there had been much less vomiting, and six of the pills had been retained. The night, however, was one of great suffering, and the pain had gradually increased during the last six hours; at seven this morning he had severe bilious vomiting; the skin was of a more pungent heat; the tongue very white, but still moist; the thirst more urgent; the face flushed, and for the first time there was an expression of anxiety; the eye was bright, with dilated pupil; the belly more tumid; the pain also now much increased on pressure, and most severe about midway between the umbilicus and spine of right ilium; pulse 116, small, irregular, and somewhat sharp. Bleeding to faintness was performed with immediate relief; bath again ordered if the pain returned. Calomel, five grains; comp. ext. colocynth, five grains; opium, half a grain, every third hour, and if the bowels are not moved, an injection with spt. terebinth. to be administered in the evening. I now came to the conclusion that I had a case of intussusception to deal with.

14th. Has passed a more quiet night, with a little sleep, and appears to be under the influence of the opium; the vomiting, however, continues if any fluid be taken, even to the extent of a teaspoonful; the bowels have not been moved, are slightly tympanitic; pain less acute, but constant; the skin hot, with disposition to be moist; *tongue moist and less coated*; injection retained a few minutes only; pulse 122, irregular, small, and weak; pills, with calomel, colocynth, and opium, to be continued; if the pain increases, hot bath and fomentations to be repeated.

15th. Has dozed a little during the night, but has never been free from pain; four doses of the pills have been retained; face a little flushed; countenance looks sunk, but *decidedly less anxious*; *tongue clean and moist*; skin burning hot and dry; pulse 136, very irregular, and small; occasional bilious vomiting, and is afraid to take more than a teaspoonful of fluid at a time, as it produces immediate vomiting; belly slightly tympanitic, and generally

tender on pressure; the pills to be continued, and a liniment, with the *potass. tart. antimon.*, to be rubbed into the abdomen every four hours; if pain increases, an injection, with two drachms of *liq. opii sedativ.*, to be thrown up, and in the mean time from two to three quarts of thin gruel to be forcibly injected.

16th, seven A. M. Has passed a night of constant pain and vomiting, and had been wandering a good deal at times. I found him on the floor, resting on his knees and elbows, with a basin between his arms containing a large quantity of feculent matter, and one large lumbricus; everything had been rejected, and he now complains more of the "dreadful sickness" than of the pain. The pulse was 140, irregular, and very small; skin dry and burning hot; tongue clean but dry; belly tumid as before, less pain on pressure; urine scanty, otherwise natural; countenance looking pinched and haggard; says he feels a little drowsy and confused. The opiate injection was given during the night, but returned immediately. Two minims of acid. hydrocyan. (Scheele's strength) were directed to be taken every hour if the sickness continued.

Eight P. M. Six doses of the hydrocyanic acid have been taken; the sickness is a little diminished, but still very distressing at times; eyes and countenance still more sunken; tongue dry and brownish; skin dry and burning hot; pulse 148, irregular, and small; belly tumid, but bears pressure better; had felt chilly for a few minutes during the day. It now occurred to me to give inflation a trial, but I certainly did not anticipate any good result from it, as the remedy came so late, and the case appeared so desperate; however, I thought it my duty, and I therefore immediately procured a bladder, and secured one end of it to the nozzle of a pair of bellows, and the other end to a common enema pipe, and having introduced the pipe its full length into the rectum, the bellows were set in motion by my pupil, and inflation forcibly but slowly persevered in for many minutes, until the poor boy complained of a disposition to "break wind," and said that his "belly was very tight." The convolutions of the intestines could be seen and felt distinctly, the arch of the colon most so; the tube was now withdrawn, and, to my great surprise and gratification, in about twenty minutes he said he felt as if he should soon have a stool; he was therefore lifted and supported upon the bed-pan, when he passed off wind in large quantities, which in a few minutes was followed by a very copious liquid evacuation, containing, however, a few hard lumps. From this time the sickness ceased, and he expressed himself as being much relieved. A little soda-water and milk was allowed.

17th. Has passed a tolerably quiet night, dozing at intervals; no sickness; perfectly collected; has had six more copious stools; tongue still dry and brown; pulse 118, very small, but more regular; abdomen tympanitic to a great degree; slight pain, on pressure, between the umbilicus and right ilium; enjoys the soda-water and milk; to have a little biscuit soaked in warm milk and water or tea, and to take a draught of, *infus. rhei* and *comp. tinct. card.*, immediately.

18th. Improving in every respect. Has passed an enormous quantity of flatus, and several copious evacuations; bowels less tympanitic; edges of tongue moist; pulse 110, soft, and free from intermission. A cup of weak chicken broth allowed.

19th, 20th, 21st. Has continued to improve slowly; the pain on pressure, has daily lessened; bowels still tympanitic, have been freely opened, the stools are much too pale; the tongue still dry in the centre; the skin dry and hot, with pulse 104; has taken his aperient daily; the draught ordered to be repeated every morning, and to take the two following pills at bedtime, viz.:

blue pill, five grains; comp. ext. colocynth, three grains; ext. poppy, one grain; two pills.

22d. In the afternoon he was decidedly worse, notwithstanding the bowels had been freely moved, and the evacuations were healthy; the pain on pressure, too, was much less, but the pulse again mounted to 120, and was small and somewhat irregular without intermission; the tongue was dry, and the thirst urgent; the skin also hot and dry; his expression was anxious, and his present irritability formed a strong contrast to his hitherto calm and patient resignation. A saline draught, with tinct. digitalis and tinct. hyoscyam., was ordered to be taken every four or five hours, and I left him with a promise to see him again early the following morning, but at the same time with a firm impression on my mind that the case would even now prove fatal.

23d. On my arrival this morning I was much gratified and surprised to hear that about six hours after I left last evening my patient's bowels had been very copiously moved, that he afterwards slept for nearly two hours, and that he expressed himself as feeling in every respect more comfortable; at the same time, however, his nurse told me she "supposed he would not last many days longer, as a large piece of his bowels had come away with one of his stools." I immediately examined the stool, removed the substance alluded to, and having carefully washed it, I found that the woman's suspicions were correct, and that it was indeed a portion of the intestines, with some of the mesentery still adhering. On visiting my patient I found his nurse's statement correct; he was in every respect more comfortable, although the skin was still hot and dry, and the pulse 112.

From this time the treatment consisted of mild aperients, with a gradually improved diet, and at the end of a fortnight, he had gained flesh and strength sufficient to enable him to remain up for several hours during the day, although the bowels remained slightly tympanitic, and a little pain was still felt on firm pressure. At the end of another fortnight he was able to walk about, and, with the exception of being somewhat paler than before, appeared in excellent health.

It is now nearly four months since his illness, and he continues in perfect health, the bowels acting regularly. He follows his usual occupation of milking, exercising horses, etc., without inconvenience.

CASE VI. Intussusception with loss of a portion of the intestine, cæcum, vermiform process, and part of ascending colon, and subsequent gangrene of the leg. By Charles King, Esq., M. R. C. S. Lancet, 1854.

W. P—, aged six, a little boy, with fair hair and complexion, and of previous good health, was attacked without obvious cause, on the 27th of October, 1852, with swelling and discoloration of the calves of both legs; they were mottled in appearance, painful, and cold to the touch. The next day these local symptoms had subsided, but severe and nearly constant vomiting came on; this was accompanied by constipation, with much pain and tenderness in the abdomen, especially in the right iliac region. I adopted all the usual measures likely to relieve such symptoms, administered injections *per anum*, etc., but without any marked beneficial effect, a little hardened feculent matter only being brought away by the enema. The patient continued much in the same state four days, viz., until the 2d of November, when the vomiting ceased, and severe general convulsions and insensibility supervened. He lay for twelve hours perfectly unconscious, with a widely-dilated pupil, unacted on by light, a quick thready pulse, cold, clammy perspirations, and a mucous rattle in the chest. Under the influence of the most powerful stimuli he rallied. A blister was applied to the nape of the

neck, and one-grain doses of calomel administered every four hours. Beef-tea was also ordered to be taken *ad libitum*. Convulsions continued at intervals during twenty-four hours, viz., till the night of the 3d, when he slept pretty well, and on the 4th seemed, on the whole, in a better condition. Complete consciousness had returned, but pain was still complained of in the right iliac region, and the whole abdomen was slightly distended and tympanitic. The constipation continued complete, and an injection which was this day administered returned offensive, and mixed with dark blood. Calomel was still given, but in half grain doses.

During the next four days no material change occurred; no motions were passed from the bowels; no injections were administered, but fluid nourishment was given freely.

On the 7th of November the mucous membrane of the mouth was observed to be slightly ulcerated, but the breath had no unpleasant odor, nor were the gums swollen. The mercury was, however, discontinued. Not any active or urgent symptoms were now present, but the patient was of course much debilitated. On this evening (7th), being eleven days after the commencement of the symptoms, five days after the vomiting had stopped, and four days after the cessation of the convulsions, he passed the cæcum, with its vermiform process, and part of the ascending colon. The intestine has been entirely opened, but at the time it was passed the cylinder was complete in many parts. The mass was passed without the patient's knowledge, and during sleep. The next morning he had a natural and solid motion, and seemed improving in condition. No change in the symptoms occurred during the next day or night (the 8th), and he slept well; but on the morning of the 9th, the left leg was noticed to have become cold, and on examination I discovered that the arterial pulsation in the groin, and below that point, had ceased. The patient, however, complained of nothing, was allowed a nourishing diet, and the limb was wrapped in flannel. During the day he had diarrhœa, which it became necessary to check by astringent medicines.

It will not be needful for me again to refer to the intestines, for since this time they have acted pretty regularly and naturally, and have given me no further trouble.

The patient's health was kept up by wine, tonics, etc., but the whole leg below the knee soon became gangrenous. This proceeded rapidly, and on the 18th of November I solicited Mr. Hilton's opinion on the case, especially as to the propriety of immediate amputation. The line of demarcation not being very clearly defined, the strength of the patient not being good, and bearing in mind the necessary loss of blood which must occur in performing amputation, it was thought better to rely upon the efforts of nature to repair the injury done, experience having shown that spontaneous separation by gangrene very often occurs satisfactorily, below the knee-joint, a circumstance probably depending on the free arterial anastomosis from many and different sources at that part. Warmth in the limb was felt to about three inches below the patella, but beyond that point it was cold. The whole limb was now enveloped in cotton wool, and exposed only every second day. Infusion of serpentaria, and sesquicarbonate of ammonia were administered three or four times daily.

On December 1st, the line of demarcation was distinct, exactly across the middle of the knee-joint, the superficial parts below which were in a state of slough. The patient's health was tolerably good. The offensive effluvia from the dead structures being great, I cut through the soft parts about three inches below the patella, and then sawed through the subjacent bones. The stump

was dressed with a nitric acid lotion. In a few days the whole of the remaining sloughs of soft parts had separated, and in such a manner that three openings were formed, an inner exposing nearly the whole of the internal condyle of the femur, an outer exposing the external condyle, and an anterior exposing the whole of the cutaneous surface of the patella. Below these openings a broad ring of living vascular structure encircled the heads of the tibia and fibula; the divided ends of those bones of course protruded beyond the soft parts. The surface looked tolerably healthy and vascular, but it seemed too much to expect that granulations should cover the large surface of bone exposed; it was therefore considered whether it might not be advisable that the femur should be sawn through just above the condyles, and a flap to cover it made posteriorly, where the skin continued healthy, and well supplied with blood. Delay was, however, resolved on, as it was hoped that granulations might creep over the condyles and cover the patella, and that, on the separation of the dead ends of the bones, nature might effect her own cure, with a long stump and a good bearing point upon the knee. This hope has been completely realized. Strict attention was paid to the patient's health, and care taken in dressing, and on the 16th of January, granulations had completely covered the condyles and the patella, and Mr. Hilton on that day twisted off the shafts of the tibia and fibula from their epiphyses. The openings thus made soon closed, and the whole stump commenced to skin over. Powdered bark was applied to the surface of the granulations, with nitric acid wash. Tonics and wine were given in full doses. This process of healing proceeded slowly, and occupied some months for its completion, the tender recently formed skin having a constant disposition to ulcerate in patches with the slightest deterioration of the patient's health; however, I am now happy to report that the stump has completely healed, will bear pressure well, and is a remarkably good one. The epiphyses of the tibia and fibula which remain are turned back, and the limb now resembles in appearance a very high amputation below the knee.

I may add that the pulsation in the left groin is still absent, and also that the patient now frequently suffers from indigestion. The attacks are somewhat acute, are attended with fever, pain in the abdomen, and terminate with slight diarrhoea. On one occasion an attack was clearly caused by vegetables which he had taken. It may be interesting physiologically to consider whether the diminished length of the large intestine may not have an influence in producing these symptoms.

CASE VII. *Intussusception and separation of a part of the ileum.* By Dr. Forcke, of Goslar. Medical Examiner, 1841.

A mechanic, forty-nine years old, had been in the campaigns of 1812-13-15, and from that time had very often suffered from colic, and other signs of abdominal disorder. In March, 1838, when first seen, he had not left his bed for five months: he was excessively emaciated, pale, and broken down by irritative fever; during all this time, also, he had suffered from costiveness, gripes, and vomiting. On examining the abdomen, a large, long, hard, and sensitive tumor was felt on the right side, which occupied the usual position of the caecum and ascending colon. Various antispasmodic means produced but little effect on the symptoms from which he suffered. The only ease he received was derived from his bowels being opened, and from the use of enemata containing opium. The pains in the tumor and in the abdomen rising to a fearful height, the patient was ordered calomel and opium, and emollient poultices over the whole abdomen. These diminished the pain, and produced free evacuations, rest, and sleep; but the tumor remained unaltered. On the

7th of April, a severe hemorrhage from the intestines occurred, and was followed by the discharge of pus, which, however, ceased when the patient took large quantities of lime-water.

On the 28th of April, the patient had an enormous discharge from the intestines, which made him feel as if something had been torn out of his abdomen, and induced him to examine the evacuation. He found therein, in the midst of feces and blood, a portion of ileum which measured two feet nine inches and a half along its convex border; it was dark and livid, but had a firm texture, and was still connected with a portion of mesentery. Its discharge was followed by a slight hemorrhage and a considerable secretion of pus, which, however, again ceased after using lime-water. The patient was almost speechless with exhaustion, but the pain and the tumor had nearly disappeared. Tonics were administered, the fever diminished, and the strength rapidly increased. In the following October, he had regained all his former strength, and was hale and hearty, except that, on severe bodily exertion, the sensation of tension around the umbilicus, and of dragging of the stomach, would still return.

CASE VIII. *Intussusception of ileum relieved by an operation.* By John R. Wilson, M. D., of Mississippi. *Transylvania Journal of Med.*—*American Journal of Med. Sciences*, 1835.

The subject of the operation was a negro man, aged about twenty years, the property of Mr. Charles Dement. The patient had labored for seventeen days under bilious colic, and stercoraceous vomiting, and the other more alarming symptoms of this disease had appeared. All the active purgatives were administered in vain, and, on the evening before the operation was resolved upon, as a *dernier resort*, some ounces of crude mercury were given. The constipation remaining, with the other formidable appearances, it was plain that nothing but the knife could save the patient.

The operation was performed in the following manner: An incision was made along the linea alba, commencing above the umbilicus and extending two or three inches below it, being in all about five inches in extent. The bowels being protruded through the wound, that portion involved in the stricture came into view. It was found to be in the *ileum*. The bowel was grasped above and below the point of obstruction, and after several efforts of considerable force, the adhesion gave way. The exertion necessary to break up the attachments, it was feared, might lacerate the intestine, but no such accident followed. The bowel strangulated was of a dark livid appearance, evidently approaching to gangrene, and of double its ordinary size. The vessels of the omentum were also deeply engorged with black blood, apparently stagnant. The parts seemed to be on the verge of mortification. After returning the intestines into the abdomen, having carefully excluded the atmosphere during the operation by a warm, moist cloth spread over the viscera, the wound was made secure by a few stitches with the needle, and adhesive strips. The patient was put to bed, and in a very short time voided the mercury which he took the evening before. His recovery was rapid and entire.

The success of this case, in which the operation was so long deferred, and at last performed under such unfavorable circumstances, warrants the propriety of resorting to it in the disease, and proves that relief may occasionally be afforded by this means, when all others have failed.

SECTION VII.

HERNIA.

CASE I. *Strangulated hernia containing an ovary and Fallopian tube. Operation; recovery.* By W. Parker, M. D., Prof. of Surgery in the College of Physicians and Surgeons of New York City. New York Med. Times, 1855.

On the 31st of October, 1854, I was called on to visit Miss F—, in consultation with Dr. W.

I obtained the following history of the case: Miss F—, aged 69, had always been in perfect health, except at times she had suffered from dyspepsia, and had been annoyed by a hernia on the right side. This hernia had existed for many years. She had attempted to keep the parts in place by means of a truss, but had failed to accomplish it. The hernia had always been reducible, and she had usually succeeded in replacing the protruded mass. About two years ago, she failed to put the parts back, became sick at the stomach, and called for her family physician, who, after awhile, effected a reduction, and she soon became comfortable.

The patient had now been suffering for three days; she had nausea and vomiting, but without dejections; the abdomen was flat, skin cool, tongue moist, pulse small, 96 beats in a minute. The tumor was hard, the size of an English walnut, and tender at its neck, under Poupart's ligament. Dr. W. stated, that yesterday, he put the patient under the full influence of chloroform, and succeeded by firm pressure in reducing the tumor, but no relief was manifested. On moving or making a slight muscular effort, the swelling reappeared. I thought of "*reduction en masse*."

I now tried *taxis*, but failed with the force she would allow me to employ. She was then put into a state of profound anæsthesia; and I again made trial of reduction. I could push the whole tumor under Poupart's ligament, but it would seem to bound back. It was now decided to operate. I cut down, and exposed the falciform process of the fascia lata, divided it freely, and then attempted to reduce, without opening the sac, but could not succeed. I could push sac and all up. I proceeded to open the sac: it contained some dark fluid and a small loop of intestine, which was also dark, but not gangrenous. In attempting to explore the neck of the sac with the finger, I receded; and to prevent it from slipping back into the abdomen beyond my reach, I passed a tenaculum into the sac, and gave it in charge of an assistant. The neck was very firm around the strangulated parts, and seemed not more than half an inch in diameter.

I divided it freely, and drew down the intestine that I might understand the condition of it; finding all right, the loop was restored. I found something left behind that was dark, shreddy, and vascular, adherent by a small band to the side of the sac. I saw it was not omentum, and concluded it might be the product of some former inflammation.

I concluded to dissect away the mass; it bled, and I carried a ligature around the whole. When I drew upon the ligature, there came into view the *ovary*: this demonstrated to my mind that the strange portion I had taken away was the *fimbriated extremity of the Fallopian tube*. I pushed back the ovary and the remainder of the tube, brought the parts together by suture, applied the graduated compress with the single spica bandage. The patient was put and kept fully under the influence of morphine. After four days an enema was administered, and the bowels were moved. A rapid recovery ensued.

CASE II. *Extra-uterine foetation in a hernial sac; extraction of the child by incision, and recovery of the patient.* By Dr. Skirvani. New York Journal of Medicine, 1853.

An otherwise healthy woman, aged 38, had from childhood an imperfectly developed inguinal hernia of the left side. She had been delivered eight times without the occurrence of anything abnormal, and on one occasion she had given birth to twins; however, in consequence of her labors being difficult, the hernia had gradually increased until it had attained to half the size of a child's head. The patient suffered no other inconvenience from it than that occasioned by its bulk, and the hernia was easily reduced during her confinement to bed. In October, 1850, she experienced, while in the act of stooping, the sensation of a round body falling suddenly into the hernial sac; from that time the hernia steadily increased in volume, and the tumor became the seat of pains similar to those caused by a burn, which were relieved by cold applications. Two months later the patient perceived slight movements in the tumor, and Dr. Skirvan then saw her for the first time; he diagnosed an extra-uterine pregnancy, but deferred operating. On the 24th of April pains set in; they extended from the sacrum to the hernia, and rapidly increased both in frequency and intensity. The patient having been put under the influence of ether, an incision five inches long was made in the fundus of the tumor, which now reached to the knee; the placenta was then observed covered with a sero-fibrous envelop three lines in thickness, the structure of which roughly resembled that of the uterus. The child was extracted living, with the membranes, but died in an hour after the operation. The wound soon closed, and the patient recovered completely; the hernia, however, continued as large as it had been before its occupation by the foetus.

CASE III. *Cæsarean section in a uterus occupying a hernial sac.* New York Medical Times, 1855.

Patient was 44 years old, mother of seven children, had suffered for many years from a reducible inguinal hernia of right side, which during her previous pregnancies had caused her great annoyance. At the *sixth month* of her eighth pregnancy, the hernia became strangulated, but by emollient and cold applications it was reduced, followed, however, by severe abdominal pains. Soon after, the uterus suddenly presented at the inguinal ring, in the hernial sac, forming a tumor of eight inches in length by six in circumference. The patient remained in bed, and went on to the *full term*. Labor commenced, the os dilated, and the waters escaped per vaginam; the tumor at the time being twenty-five inches in circumference by twenty-three in length. The Cæsarean section was then practised, dividing the sac and uterine wall; the placenta presenting, the operator introduced his hand, and delivered a well-formed living infant. Patient died on the third day after of peritonitis or hemorrhage. On post-mortem, there was a large quantity of blood in the abdominal cavity; the inguinal canal was so dilated that the open hand could easily be introduced, and the colon was found detached, and filling the cavity of the sac.

CASE IV. *Reduction of a scrotal hernia which had been for nearly six months irreducible.* By Mr. Hilton, of Guy's Hospital, London. Western Lancet, 1853.

On April 23d, 1853, Alfred Kemp, aged twenty-four, a farm laborer, was admitted to Guy's Hospital, on account of a large scrotal hernia, which had, for nearly six months, baffled the persevering attempts at reduction made by

his medical attendants. He stated, that for two years he had been subject to a small swelling in the groin, but that it had never occasioned any trouble, until about six months ago, when, during an effort at lifting, it suddenly increased in size, and passed down into the scrotum. Immediately afterwards he suffered severe pain with some sense of dragging in the abdomen and back, but no symptoms of strangulated bowels manifested themselves, either then or since. The inconvenience which it had occasioned him had, however, quite prevented him from attempting to resume his work. The treatment pursued in the country had consisted in the exhibition of purgatives and of mercurials, with partial confinement to bed. Cold water had been applied to the tumor. On examination, there was found in the left scrotum a large, movable, irregularly nodulated mass (omentum), which was soft, flaccid, and free from tenderness. Nothing like intestine could be felt. The neck of the tumor at the external abdominal ring appeared to be tightly constricted. The bowels were ascertained to have acted regularly each day. Having made careful and persevering, but ineffectual attempts to effect the reduction of the tumor, Mr. Hilton directed—

1st. That the man should observe an undeviatingly recumbent posture.

2dly. That he should have solid food, with not more than half a pint of fluid in twenty-four hours.

3dly. That a bladder of ice should be kept constantly applied to the scrotum, the latter being elevated on a cushion placed between the thighs.

4thly. That a draught containing sulphate of magnesia and wine of colchicum should be administered three times daily.

Mr. Hilton remarked, to those present, that to a young man who had to earn his livelihood by hard labor, it was a matter of very great importance to be relieved, if possible, of such an affection as the present, which, apart from the inconvenience necessarily attendant on its bulk, would perpetuate a liability to the occurrence of strangulation. He pointed out that the important obstacle to reduction was probably offered by the loaded condition of the blood-vessels of the protruded part, and that, consequently, the indications for treatment were—1st. To decrease the quantity of the circulating medium generally, as far as might be done without unduly depressing the vital powers; and, 2dly, by local means to constrict and unload the congested vessels of the incarcerated omentum. The one was to be accomplished by purgation, diuresis, and abstinence from fluids; the other, by the recumbent posture and the application of pressure and of cold. With respect to the last mentioned agent, Mr. Hilton further remarked, that in the case of tumors within the scrotum, the use of cold, by exciting constant and powerful contraction of the dartos, insured the application of the best and most uniform kind of pressure which could possibly be exerted. The effect of purgation was also extremely valuable, since not only did it unload the vascular system generally, but that part of it especially involved in the existing lesion, the omental veins being, with those of the intestines, tributary to the vena portæ. It was just possible, also, that by keeping the stomach and transverse colon comparatively empty, the contractions of those organs, to both of which the omentum is attached, might exert some little influence in tending to drag upwards into the abdominal cavity the displaced portion of omentum. To return to our case. After the aforementioned treatment had been rigidly pursued for a few days, it was noticed, that the man's belly had lost its rounded contour, and become pinched in and narrow; the tumor, also, had diminished in size, and felt soft and loose, having lost its plump and definite form. The bowels had been very freely purged.

On the 28th, Mr. Hilton again examined the tumor, and, with very slight pressure, succeeded in passing it up into the abdomen.

On the 30th, the man was discharged, quite free from all the inconveniences of his complaint; and wearing an efficient truss; the hernia had not again protruded.

CASE V. *New mode of returning strangulated hernia.* By T. A. Wise, M. D., Surgeon, late in the East India service. Boston Med. and Surg. Journal, 1852.

The following are the particulars I promised to send you, regarding a new method of reducing strangulated hernia. While I had charge of a hospital in India, an elderly man was brought to it with a strangulated inguinal hernia. After in vain employing the usual means of reduction, I was preparing to liberate the gut with the knife, when a Mussulman gentleman suggested that the following method should be first tried, as he had seen it successful. As it appeared most simple and effective, I at once proceeded to try it. The patient was placed upon a table, and a long sheet, folded several times on itself, was carried round the lower part of the abdomen of the patient, was twisted on itself in front, and again on the sides, so as to enable an assistant, standing on each side of the patient, to hold the extremities of the sheet, and to pull them gently upwards, or towards the patient's head, while a third assistant held the feet steady, and the surgeon used the taxis.

As the gut immediately above the strangulated portion was superficial and distended with air and liquid, it was drawn upwards with considerable force from the hernial sac, which was assisted by the surgeon using the taxis; when the strangulated portion was immediately reduced.

This simple method may, in a very large proportion of cases, be employed with perfect safety and at an early period before inflammation and thickening have complicated and increased so much the danger of the operation, which is thus rendered unnecessary.

CASE VI. *Strangulated hernia complicated by the presence of the bladder, which organ was opened during the operation.* By Elkanah Williams, M. D., of Cincinnati, Ohio, Western Journal of Med. and Surg., 1853.

About the middle of January, a man entered the service of M. Roux, at Hôtel Dieu, with strangulated hernia. It was congenital inguinal hernia of the right side. The patient, previous to the age of 21 years, had never worn an apparatus to keep it reduced. After that time he procured some kind of a bandage, which, however, did not retain the intestines in the abdomen. For four days previous to entering the hospital, he had been laboring under urgent symptoms of strangulation—repeated attempts at taxis having failed. When M. Roux first saw him, the tumor was very large, and the patient in a very grave condition; so he at once decided upon an operation, considering the case one of ordinary hernia. The first part of the operation was very simple—soon he reached the strangulated portion of intestine, divided the stricture and returned it. In the lower and internal part of the sac, however, was then seen a tumor of considerable size with a smooth and polished surface, and some small granular deposits of adipose tissue, which he took for the epiploon. In passing the finger around the base of it, there seemed to be no adhesions. He attempted to reduce it, and, in part, succeeded. As soon as the finger abandoned the reduced portion, it at once reprotruded. More fully satisfied than ever that it was omentum, he continued to *excise* it. He commenced by cautiously *paring* off a small part at a time; at length an opening was made, through which suddenly gushed a quantity of *urine*! Then for the first time he saw that it was a cystocele, and that he had opened the bladder. He immediately closed up the small wound he had made, and

applied the usual dressings. During the day the patient had one or two evacuations from the bowels; still the symptoms of strangulation persisted, and the patient died twenty-six hours after the operation. On post-mortem examination it was found that at least *half* the *bladder* protruded into the hernial sac. It seems most probable that the bladder had been thus protruded for many years, by the side of the hernial portion of intestine, without giving rise to any symptoms. Indeed, M. Roux never once thought of the bladder till he had punctured it and saw the discharge of urine, and says it is the first case of hernia with this complication that he had ever seen. In an account of this operation, which he published in the *Gazette des Hôpitaux*, he says: "While I am cheerful to avow my mistake, I must add that I do not think it had any influence on the result of the case." The extreme rarity of this complication of inguinal hernia and the mistaken diagnosis by this distinguished surgeon, invest the case with very great interest.

CASE VII. *Congenital hernia.* By W. M. Fairbrother, M. D. *Lancet*, 1850.

A remarkable instance of congenital rupture occurred in my practice on the 29th of June last. Upon the birth of a child, a large portion of intestine, about twenty-eight inches in length, was found protruding from the navel, dark and discolored. It had evidently been out of place for many days. On my next visit, the bowels had acted, but were more protruded, with a considerable portion of the mesentery. I made a careful and limited incision downwards in the median line, and, with considerable trouble, reduced the intestine, and applied sutures and a compress. The child, however, died the same evening, with all the symptoms of strangulated hernia.

CASE VIII. *A hernia formed in the thickness of the wall of the urinary bladder.*

The late H. Cloquet, of Paris, dissecting a subject, aged about 60 years, met with the singular occurrence of a loop of the intestine, whose sac was formed in the vesical parietes. The internal surface of this herniary tumor was lined by the peritoneum, and contained a small portion of the ileum, which appeared to be strangulated. The entrance was at the summit of the bladder, was very short and circular, and was analogous to what is seen in old inguinal herniæ.

CASE IX. *Extensive diaphragmatic hernia in a horse.* By Charles M. Wood, Veterinary Surgeon. *Boston Med. and Surg. Journal*, 1852.

Wednesday, March 10th, 2 P. M., I was requested to visit (at Ward's stable) a horse, the property of a physician of this city. On my arrival, I found my subject (a bay horse, 13 years old and in good working condition) to be laboring under the following symptoms: Profuse perspiration; extreme restlessness, and hurried respiration; pawing violently; suddenly throwing himself down and rolling on his back; lying in that position only for a few seconds, then quickly rising again, to resume his pawing and scraping as before. These symptoms were accompanied by severe spasmodic contractions of the abdominal muscles. On inquiry of the owner, who was present, he informed me that he had driven the horse during that forenoon; but although he was not in his usual spirits, he saw no trouble with him till 12 M., when he was discovered pawing and attempting to lie down in the street where he had been left standing. He was immediately taken to the stable, and an attempt made to give him medicine, which the violence of the symptoms rendered extremely difficult to do. However, assisted by those present, I raised

the animal's head for the purpose of giving him an antispasmodic drench, which was composed of tincture of opium ℥j ; sulphuric ether ℥ij ; water ℥viij . This he stoutly resisted, and in his struggles he was thrown down. Being secured in this position, the medicine was easily administered. I also gave an injection of laudanum, etc., *per rectum*, and he was then allowed to get up; but he was no sooner on his feet than he walked into the stall and commenced pawing as before. I then applied a stimulating liniment to the abdomen, which at first excited him very much, but after awhile appeared to give some relief. This, however, was of short duration. I visited him again at 4 P. M. Found him standing, pawing, and frequently looking back to the left side, which was evidently the seat of disease. I walked quietly into his stall, and carefully examined him. The pulse was $6\frac{1}{2}$, and feeble; the respiration painful and laborious; the whole body, especially the extremities, very cold; the pupils dilated, and the eyes wild and staring. I repeated the medicine, and also the injection. At 6 P. M., there was no abatement of the symptoms; he was still standing, not having laid down during my absence; he was constantly pawing, first with one foot and then with the other, the body and extremities remaining cold, and the pulse depressed and small. I now gave up all hope of his recovery, being of the opinion that some serious lesion of the stomach, diaphragm, or intestines must have taken place. He appeared now to suffer little pain, being, as I supposed, under the influence of the opiates; but his tail was trembling, the head thrown up and down, it being often turned to the left side as before. I offered him some tepid water, of which he drank moderately; gave him an injection of soap and water, had him well covered, and left him. At 10 P. M., he was still standing, and pawing as usual; respiration quick and more laborious, with a general tremor of the whole body; great anxiety, and rapidly increasing prostration. He was evidently sinking.

Thursday, 11th, $7\frac{1}{2}$ A. M., visited my patient, just in time to see him fall dead in his stall. This was about nineteen hours after the attack.

Post-mortem examination, eight hours after death.—Present, Professor J. B. S. J., Dr. C. and Dr. G. On removing a portion of the large intestines, the stomach appeared, very much distended, but was otherwise healthy. There was discovered, immediately, a rupture in the tendinous portion of the diaphragm, of about three inches in length, and on the left side, through which some ten or twelve yards of the small intestines had been forced into the chest, completely strangulated, and in the highest state of congestion. There was, also, a rupture, nine or ten inches in length, of the muscular portion of the diaphragm on the same side. That these ruptures were the immediate cause of death, there is of course no doubt. It is also probable that the lesion must have occurred recently, for such an injury usually proves very speedily fatal. The rupture may, however, have happened some days previously to the strangulation.

The causes of rupture of the diaphragm are very obscure; but I think it is usually the consequence of sudden and violent exertion; although it might in this case have been superinduced by the over-distended state of the stomach.

SECTION VIII.

WOUNDS OF THE LIVER.

CASE I. *Gunshot wound of the liver; recovery.* By Frederick G. Leroy, M. D., Resident Surgeon to the New York Hospital. ✓

Dr. Leroy published this case in the *New York Med. Times*, 1851, under

the title of "Punctured wound of the liver, followed by recovery." It was produced by the firing of a pistol while the patient was in the act of withdrawing the ramrod. This passed through his hand and struck the abdomen, and when the finger was introduced, the liver was felt to be *lacerated*. Portions of the clothing were removed, but nothing further said about the ramrod; whether it penetrated, lodged in the body, or passed through, we are left to conjecture; and the wound thus made is called a punctured one.

Wm. Craddock, æt. 27, New York, seaman, admitted into the New York Hospital July 4th, 1851 (Dr. Post in attendance), with a penetrating wound of the abdomen, caused by the premature discharge of a horse-pistol, from which he was endeavoring to withdraw the ramrod. The rod passed between his hands, and struck the abdomen a little to the right of the median line, about an inch below the common cartilage of the false ribs on that side. Upon introducing the finger, and tracing the course of the wound, the liver could be distinctly felt, and on passing its extremity over the surface of the organ, a laceration of it was detected, that corresponded with the external opening. From the nature of the injury, its precise depth could not be ascertained. Patient had on at the time of the accident, a common colored shirt, with a red one beneath it; the fragment of red flannel was removed by the physician who attended him previous to his admission into the hospital. The portions of the colored garment were supposed to have been carried in with the ramrod. Has vomited several times since the accident; at present complains of no pain, but has some difficulty in respiration. There was a slight venous hemorrhage from the wounds. Pulse natural.

Treatment.—Edges approximated by means of a suture. Cold water dressing. R.—Tr. opii \mathfrak{m} xxx. P. M. R.—Pil. opii gr. i, q. 2 h.

July 5. Patient passed a comfortable night, after having taken two of the above pills. Bowels being confined, ordered an enema containing ol. terebinth. $\mathfrak{f}\mathfrak{ss}$; wound covered with lint saturated in m. g. a., and empl. vesicans over this as a prophylactic. Strict diet.

7th. There is slight tympanites; the bowels remaining constipated, was directed R.—Cal. gr. ii, q. 2 h. until they were moved. Camph. cataplas. to abdomen. The calomel vomiting him after the second powder, it was discontinued; R.—haust. effervesce.

12th. General condition favorable, no symptom of an urgent character having presented since the last note. At present there is no febrile action, has a natural stool, etc. The slough is separating from the edges of the wound, which is closing up with healthy granulations. To-day, removed several pieces of cotton, which upon examination proved to be the missing portions of the colored shirt.

20th. Has had several paroxysms of pain over the region of the liver, and in the right shoulder, which he states to have been of a tearing character, and most intense in the evening. Respiration labored, and 27 per min. Pulse alternating between 72 and 80, without any undue excitement. R.—Op-ates. Camph. poultice to abdomen, and empl. vesicans over the seat of pain; under the influence of which remedies, all the unpleasant symptoms gradually subsided.

23d. Several chills have occurred in the last two days; general condition very unfavorable, countenance haggard, hot surface, labored inspiration, cough, with pain in the side. Pulse 92, frequent and hard, slight dulness on percussion. R.—Tart. ant. et potass. gr. $\frac{1}{4}$, q. 2 h. Empl. vesicans to side.

24th. After taking one dose of the antimonial solution, patient became so much prostrated, as to require stimulants, and upon reaction being in a great measure established, R.—Pulv. ipecac. gr. ss; m. g. a. \mathfrak{ss} as a substitute for

the above solution. Still complains of pain in the side, and difficulty on inspiration. Auscultation reveals an indistinct crepitus. R.—Emplas. vesicans over the posterior surface of the chest.

30th. All the thoracic symptoms have subsided, with the exception of a slight uneasiness in the right side. Chills continue; has had as many as four in the twenty-four hours. After some of these attacks, patient is very much prostrated, and at times quite flighty. For these the sulphate of quinia has been freely given, commencing with gr. x, and gradually increasing up to the present time, when he takes gr. xxv in the day. The wound has entirely healed.

August 4. Has had no chills for four days past. Quinia has been continued to the present date, when it is directed to be gradually diminished daily. The whole surface of the trunk is covered with suppurating boils, that occasion considerable constitutional irritation; upon their subsiding, patient's whole system seemed to undergo a marked change for the better, and he commenced gaining in flesh.

16th. Since last date, an abscess has formed, and pointed in the original wound, opened spontaneously, and gave exit to a greenish discharge, pus apparently tinged with bile; upon its ceasing, the wound again closed, and he was discharged cured.

CASE II. *Wound of the liver; excision of a large portion of the right lobe.*
By J. C. Massie, M. D., of Houston, Texas. New Orleans Med. and Surg. Journal, 1852.

Some three weeks since I was summoned, in great haste, to visit a son of Mr. Simmons, at a distance of some thirty miles from this city. A brother of the unfortunate youth wounded, had a gun lying across his lap, picking the flint; it went off, the contents of the whole load passed into the right hypochondrium, and mostly out about the region of the epigastrium. The youth, who is about seven years of age, was standing close to the gun which was charged with large shot; a portion of the liver protruded through the external wound. A physician in the neighborhood was sent for, who reached the case about four hours after the accident. After examination, he viewed the case as hopeless, and consequently declined doing anything; he visited the case, however, on the next day, and advised that I should be sent for. On the fourth day after the accident, I visited the patient, accompanied by my friend Dr. Black. We found him in a very deplorable situation; the anterior margin of the right lobe of the liver was protruding through the cavity on the right and a few lines above the umbilicus; it was in a gangrenous condition, with a portion of the omentum attached; the substance of both was so much altered, that it was really difficult to tell what the protruding portion was; the abdomen was very tense and hard, the least pressure giving severe pain; there was great arterial excitement, accompanied by a high inflammatory fever. This is a brief and very succinct account of the condition of the little patient, and my friend Dr. Black, as well as myself, regarded the case in a hopeless condition. I informed his friends, after making known to them the danger of the operation, that I would operate, remove the gangrenous portion of the liver, and give him all the possible chance there could be left for his life. From the external character and appearance of the wound, I was fearful gangrene had extended within the abdominal parietes.

I commenced the operation by enlarging the orifice about four inches; on examining the substance of the liver, I found two shot had passed at least two and a quarter inches from its inferior border, penetrating through it; the substance of the liver which was in juxtaposition to the wounds, had a thick,

grumous appearance, with sphacelated portions. Under the circumstances, I determined to excise every portion of the liver which had the appearance here described.

Blanchard, in his *Anatomia Practica Rationalis*, says: "A small portion of the substance of the liver may be removed without necessarily inducing a fatal result;" and Dr. Hennen (*Milit. Surg.*, p. 439), says: "A deep wound of the liver is as fatal as if the heart itself was engaged."

I felt great apprehension in excising the amount I was necessarily compelled to do, and when I inform you that I excised quite one-half of the right lobe, equal to twice the amount of the left, you will then see how easy it is for persons high in the profession to make statements without proper data.

When the operation was finished, I passed a strong suture through the abdominal parietes, closed the wound, and subsequently a vigorous antiphlogistic treatment was adopted. I will not encumber your pages with a long detail of the daily treatment of this case. Nothing very remarkable, except for about ten days his discharges were passive, and he could exert no control whatever; at the present time he is able to exercise in his room, secretions natural, wound nearly healed up, and I consider him entirely out of danger.

CASE III. *Removal of a portion of the liver.* By John Macpherson, M. D. •
Ranking's Abstract, 1846.

The only notices that I have met with on the subject of the excision of portions of liver, are the following:—

In Blanchard's *Anatomia Practica Rationalis*, Amsterdam, 1688, is to be found the case of a soldier who was wounded by a sword in the hepatic region; the wound was succeeded by a profuse hemorrhage and delirium. On the cessation of the hemorrhage a morsel of the substance of the liver was removed by the forceps, and the patient recovered after many threatening symptoms. At the end of three years he died of fever. On dissection, a small portion of the lower part of the wounded lobe of the liver was observed to be wanting; the other viscera were sound.

Professor Dunglison quotes a case from *Dieffenbach's Journal*, in which a boy fell on a knife, and a portion of the liver protruded. Without being aware of its nature, the surgeon in attendance cut it off with his scissors. No bad effects followed.—*Amer. Med. Intelligencer*, vol. i. p. 191.

The history of the second of these cases is very imperfect, and in both the portion of liver removed seems to have been very small.

I now proceed to the case which has fallen under my own observation, and which appears to be the first case of the kind of which a complete history has been published.

A Hindoo, aged between 60 and 70, was in June last brought in, a distance of six miles, to Howrah, with a spear wound in the abdomen about three inches above the umbilicus, and two inches to its right, through which a triangular portion of liver protruded, of about the size and shape of the four fingers of the hand, lying side by side. The wound itself did not exceed an inch in length, and was completely choked up by the liver. The man stated that he had been stabbed in the dark about twelve hours previously, and that the liver came through the wound as the spear was drawn out. It was added that there had been a very copious hemorrhage, but the liver itself was not wounded, and though the patient was in considerable pain, the pulse was very little depressed.

My friend, Dr. C. M. Henderson, who was present, agreeing that it would be impossible to return the protrusion without enlarging the wound to the

extent of several inches, it was resolved, rather than wait for the tedious process of sloughing, to remove it by the knife.

To prevent hemorrhage, a ligature was applied tightly round the base of the protrusion, which was then cut off. Nevertheless, two arterial twigs bled very freely, and it was found necessary to take them up, and a double ligature was also passed through the stump and tied on either side, when all bleeding ceased. No attempt was made to return the portion of liver which still filled up the wound, as it was of course desirable to prevent all risk of blood or of bile being extravasated into the cavity of the abdomen. For a day or two the patient was rather low, and had slight irritative fever, and the bowels remained costive. These symptoms, however, yielded to a few doses of purgative medicine, and in nine days the ligatures came away along with a small slough of liver; the wound granulated and healed, and the man returned to his home in three weeks. No bilious discharge occurred from the granulating surface of the liver. The portion of liver removed, after having lost its blood and being in spirits for some weeks, weighed $1\frac{1}{4}$ oz. Its surface is uneven, though not torn, and it is probably a portion of the edge of the right lobe, from near the notch between it and the left.

It is difficult to explain how so large a portion of liver could have protruded through so small a wound, even if allowance be made for the size of the wound being diminished by the contraction of the abdominal muscles, and for the protruded portion becoming congested. It is unnecessary here to allude to the wounds of the abdomen generally, or of the liver in particular (for in this case the liver does not seem to have been wounded), or to the extraordinary recoveries from almost every variety of them. Such cases are innumerable.

It has long been known, from the experiments of one of the Monros, that rabbits have suffered very little from having portions of their livers cut off. It was also known that patients live for years after the loss of very considerable portions of liver by hepatic abscess; and may exist for months with the whole liver converted into a mere cyst; but the actual removal of a considerable portion of the liver from the human subject, with so very little constitutional disturbance, even allowing for the patient being a native, is a fact of considerable interest in medicine and in physiology.

I may add, that the patient complained of a good deal of pain when the surface of the liver was touched, but that cutting through its substance hardly caused him any.

The old man appeared two months after as prosecutor in his own case; he was in perfect health; there was a little puckering in of the skin about the wound, and the liver was evidently adherent beneath.

CASE IV. *Wound of the liver healing spontaneously.* *Lancet*, 1828.

Mr. Scrivens produced to the society a part of the liver of a gentleman who had stabbed himself with a carving knife, showing a complete cure by nature. He stated that he was called to the patient soon after he had stabbed himself; that he found him in a state of syncope, having lost a great quantity of blood, but without having vomited; and that the patient did well, without any active treatment until the 11th day. On that day, no symptoms of enteritis, or peritonitis, having appeared, he incautiously left his home, walked from the borough into the city, where, it is supposed, he had drunk freely of spirits; he returned, was taken with mucous-enteritis, which gradually subsided; and then with serous-enteritis, of which he died. The body was examined by *Mr. Scrivens*, in the presence of *Mr. Callaway*, *Mr. Grainger*, and *Dr. Blundell*, and there was every reason to conclude, from the state of

the parts through which the knife had passed, that, but for the imprudence of the patient on the 11th day, he would at this moment have been perfectly well.

Mr. Callaway considered this was interesting, as it had generally been considered that wounds of the liver proved fatal. In the present instance the wound in the liver was considerable, and had perfectly cicatrized.

Mr. Ashwell expressed great satisfaction in seeing this specimen. Some years ago it was considered that wounds of the abdomen were to be regarded as so fatal, that surgeons hardly ever thought of attempting a cure. Modern practice, however, had sufficiently shown the futility of this idea; and he was always happy to find an instance added to the record of skilfully-treated cases of wounds through this important part of the body. He considered that some analogy might be drawn between such a case as this and the extirpation of cancerous uterus.

SECTION IX.

WOUNDS OF THE SPLEEN.

CASE I. Wound of the spleen followed by its almost entire removal; patient living thirteen and a half years afterwards.

This case was published in the *London Medical Gazette*, and also in the *Lancet*, 1844, under the title of "Extirpating the Spleen." The patient had been stabbed with a knife in the left side. The reporter, M. Berthet, of Gray, called in eight days after the wound was received, recognized a considerable tumor formed by the spleen, which exhaled a strong odor of putrefaction. He says he cut it out, and after a few methodical dressings the patient got well, and lived thirteen and a half years. His digestion is said to have been well performed. He died of pneumonia. At the *post-mortem* examination, a very small portion of the spleen was found, not bigger than a filbert, adhering to the external parietes of the stomach.

The author says he cut the spleen out, but does not describe the operation. We infer this was little else than clipping away the protruding portions as they lost their vitality. The organ itself was undoubtedly removed by the results of inflammation, chiefly by suppuration and absorption. The operation, we are satisfied, cannot be said to have been the extirpation of the spleen.

CASE II. Excision of the spleen. By J. Chapman, Esq., *Lancet*, 1838, vol. xxxiii.

The subject of this case was a stout and healthy man, of about thirty years of age, who was gored by a buffalo, in the Morung Forest, which produced a horizontal wound, of about two inches in length, through which the spleen protruded, and remained in that state for six days, when the patient, to seek medical relief, rode into the station, a distance of fourteen koss, and put himself under Dr. McDonnell's care. A ligature was, in the first instance, applied with the view of interrupting the circulation, and thereby removing the mass; but on further consideration, he determined to excise the protruded viscus, which being done, and ligatures applied to two bleeding vessels, with simple dressing, and rest in the horizontal posture, the case rapidly recovered.

It is now two months since the operation was performed, and the man as yet enjoys his usual health.

SECTION X.

SECTION THROUGH THE ABDOMINAL WALL.

CASE I. *Rupture of the uterus; abdomen laid open, a dead child removed, and the mother saved.* By John Neill, M. D., Professor of Surgery in the Pennsylvania Medical College. Medical Examiner, 1854.

Reported by Jno. K. Mason, M. D. Philadelphia.

Monday, 24th of July, called to Mrs. John McDevitt, South above 20th Street, in labor with her sixth child; reached her at 9 P. M.; had been in active labor for about an hour; of a florid complexion, somewhat fleshy, large muscular development, with all the appearance of possessing a constitution of more than ordinary strength and vigor.

Upon examination, found the os uteri about half open, membranes presenting unbroken, the head to be felt high up above the superior strait; the pains were good, but by no means violent, with distinct remissions of five or six minutes; left her, and returning in about an hour, found the os uteri fully open, pains somewhat stronger, but still the presenting part did not descend. I now ruptured the membranes in the expectation that, as there was neither contraction nor rigidity, the head would come down into the pelvis without further delay. In this I was disappointed, and it was evident that the head had some difficulty in entering the superior strait. Still it advanced a little, and I thought I could detect the anterior fontanel looking towards the left acetabulum, giving the fourth position of Baudelocque. I was, however, by no means certain on this point, but resolved to wait. I made a visit in the next street, and returned to the patient in less than half an hour; the pains were now much stronger, and I thought that the head had advanced slightly. At this time Mrs. M. was obliged to get up, for the purpose of relieving her bowels, and I went down stairs, still without the slightest anxiety as to the result of the labor, for the spirits were good, the countenance cheerful, the woman well formed and vigorous, and a state of active labor had not existed for more than two hours and a half.

While at stool, the patient had two pains; during the latter she suddenly complained of intense agony, with a burning sensation in the right side; the woman hurried her to bed, and called me into the room; I found her on her back in great torture, which she assured me was no longer the pain of labor, but that something had gone wrong inside of her.

I examined her pulse and found it but little altered; this, added to the circumstance of there being neither vomiting nor cold clammy skin, nor anything like an approach to syncope, made me hope that matters were not so bad as I had at first apprehended; but after administering some forty drops of laudanum, using hot fomentations, and waiting for some time, finding that the uterine contractions were completely suspended, that the presenting part had receded, and that there was a sanguineous discharge, though not profuse, from the vagina, I felt convinced that the uterus was ruptured.

Before, however, proposing any operation, I called upon Dr. Hollingsworth for his advice and assistance. He immediately came, in the kindest manner, and after careful investigation, the diagnosis was distinctly made out. The placenta had *not* passed into the cavity of the abdomen, for it could be distinctly felt with the cord passing from it. The head of the child could be detected through the abdominal parietes occupying the lower part of the abdomen on the right side, near the inguinal region, but no portion of it remained in the uterus.

* * * * *

After due consideration, however, we determined to explain the nature of the necessary operation by turning, to the patient, and propose it as a *dernier ressort*. This we did, but she absolutely refused to submit to it; and from the hydrocephalic condition of the head, afterwards ascertained, we had reason to be thankful that she did so. At this time, there was no vomiting, the expression of her countenance was good, the pulse firm, and the skin natural; the pain in the abdomen, at first very severe, had now much abated; and after administering a powerful dose of morphia we left her, determining to see her in the morning, and then be guided by circumstances.

Next morning, the 25th, when Dr. Hollingsworth and myself visited her, we found her much better than we anticipated; pulse firm and strong, countenance bright and mind unclouded; longer to leave her undelivered was out of the question; professional duty and common humanity alike demanded that an effort, however desperate, should be made to save her. We, therefore, determined to propose gastrotomy, as that operation, in our opinion, afforded her the best chance; to this, encouraged by feeling better than she anticipated, she at length consented, and after consulting Dr. Neill, who undertook the performance of the operation, it was determined on.

Operation by Dr. Neill.—The patient was placed upon a stout table covered with blankets, her shoulders and head supported by pillows; and as a preliminary step, about four ounces of ether were administered by inhalation. The incision was made in the linea alba, commencing about two inches below the umbilicus, and extending towards the pubes full six inches; the moment the opening was made, large quantities of mingled blood and clots escaped, the omentum seeming saturated with blood, and both the visceral and parietal peritoneum being deeply stained. A dead child's back presented, its head lying low down towards the right groin, its feet to the left; it was immediately removed and found to be hydrocephalic, the biparietal diameter of the head measuring, I should suppose, six inches, the occipito-frontal probably seven. Its entire weight I should judge to be not less than ten pounds.

The rent in the uterus appeared to be enormous, and perfectly uncontracted, for the operator passed both hands through it, right down into the organ, and, as it were, scooped up the placenta with all the coagula within his reach. Upon the removal of his hands, the womb instantly contracted to about the size of a man's fist. The blood, fluid as well as coagulated, was then removed from the cavity of the abdomen as far as practicable, disturbing the viscera as little as possible. The incision was then closed by five sutures, and afterwards by long adhesive strips, leaving an opening at the lower part of the wound to favor the escape of fluids; a compress and binder completed the arrangement.

The patient's strength was less exhausted than could have been anticipated; spirits good; pulse 120—firm and equal; the time occupied by the whole operation did not, I should think, exceed five minutes. In half an hour she was placed in bed, and an enema of laudanum administered; grain doses of opium were directed to be given by the mouth every third hour, in order to keep her, if possible, in a perfect state of repose, and prevent any action of the abdominal viscera; at the same time the system was supported by nourishing fluids, beef tea, etc.

Shortly after the operation the patient began to vomit a greenish watery fluid, which continued several hours, but was checked by the exhibition of small quantities of brandy with ice; the opium treatment seemed to agree with her, for she slept and complained of but little pain.

On the morning of the 26th I visited her in company with Dr. Hollings-

worth. Found her tolerably easy; mind cheerful; tongue clean and moist; pulse 120; the abdomen was tympanitic and very much distended; the breathing much embarrassed by the accumulation of gas. Ordered her to continue the opium pills and to have an injection containing turpentine.

On making my evening visit I learned that the bowels had been slightly opened, and that she had passed large quantities of flatus, by which the tympanitic distension of the abdomen was much lessened; breathing easy and natural; pulse rapid and weak. Directed brandy to be continued with the opium.

27th and 28th. Continued in much the same condition—occasionally vomiting.

On the 29th Dr. Neill visited her with Dr. Hollingsworth and myself. Removed the stitches from the wound, which was healthy and closing extremely well; she was now ordered milk punch, *ad libitum*.

At this time there was a very copious, dark, offensive discharge from the vagina, which was kept continually syringed with warm water and soap. The bowels had been moved once copiously; pulse 120; tongue moist, but slightly furred. The patient looked so hopeful and strong, that we began to feel encouraged.

On the morning of the 30th I understood that she had passed a restless night. Looked very much worse; the lips were pale; countenance dejected; pulse 130; vomiting of green matter without effort, in fact a regurgitation of the fluids contained in the stomach.

I began to lose hope. Still her mind never wavered, day nor night, and when spoken to she replied quickly and clearly, but without anything like an unnatural elevation, a condition which I have sometimes observed in bad cases of uterine phlebitis. The discharge from the vagina was less copious and less offensive.

When I saw her in the evening she was laboring under the worst possible symptoms; so much so, indeed, that I thought it possible she might die before morning. Her pulse was from 135 to 140 and very weak; her feet and legs were cold, also the lower part of the belly; her wrists and arms to the shoulders in the same condition, and bedewed with clammy sweat.

I confess I regarded her as moribund, and the priest in attendance told her that she was dying and must make her peace with God; the poor woman replied that she would make her peace with God most willingly, but that the Revd. Father was wrong, that she was not dying yet, she did not feel like dying. And as it proved, she was right, for the next morning, the 31st, I was agreeably surprised to find that her skin had regained its natural temperature, that her strength had improved, and that she was altogether better than on the previous day. There was no pain on pressure of the abdomen, but still there was considerable tympanites, and the pulse continued at 135.

On the 1st of August the vomiting continued, but only occasionally.

On the 2d, vomiting had ceased entirely. I watched with great anxiety for a diminution in the frequency of the pulse, as indicating some favorable change, but as yet in vain.

Notwithstanding the steady pursuance of the opiate treatment, the patient's bowels, on the 1st, were largely opened, three or four times. She complained of great pain before each evacuation; opiate enemata checked this, and on the 2d she had but one stool, perfectly natural in color, and of the consistence ordinarily produced by a dose of castor oil.

August 3d. Pulse somewhat slower—about 120; dressed the wound in the abdomen; did not think it looked quite so well; some discharge from one of the suture openings; was suffering from great uneasiness of the

bowels, they having been opened several times; before each movement considerable pain was complained of, somewhat resembling the tormina of dysentery—color perfectly natural. In the evening there again appeared great coldness of the extremities. Ordered an enema of starch and laudanum, with hot bricks to the legs and feet, brandy and milk to be given freely.

On the 4th, found the patient warm, pulse 130, tongue foul, complaining of great pain in the bowels, which had been moved several times during the night, the breathing high and labored. Both Dr. Neill and myself thought her prospect of recovery worse than usual. Dr. Hollingsworth had left town, and I was obliged to be absent from the city for some hours, Dr. Neill therefore undertook to see her for me. In the evening, I found her symptoms the same as in the morning; ordered her a large teaspoonful of laudanum, as an injection; and desired the attendant to give her all the nourishment she could take, with a continuance of the brandy and milk.

Saw her, with Dr. Neill, on the morning of the 5th, breathing decidedly improved, countenance and spirits better, though the pulse was weak and continued at 130; tongue cleaning; dressed the abdominal wound, which looked much healthier, though there was considerable discharge from another of the suture wounds; had passed a comfortable night, slept well, and had had no pain nor trouble with her bowels; but there had been a considerable discharge from the wound, described by the nurse as being of a clear red color, and devoid of smell.

At half past nine in the evening saw her again; condition unchanged, pulse the same, uterine discharge still copious, bowels had been opened once.

On the 6th, found her much improved, pulse 120, tongue clean, expression of face natural, heat of skin almost natural, with very little thirst, the abdominal wound nearly healed. In the evening, found her easy, but showing more weakness. This I attributed to the uterine discharge, which continued copious.

Morning of the 7th, stronger and better; pulse 110, discharge from the womb much lessened; had slept soundly all night. At ten o'clock, evening of the same day, great change had taken place; pulse 100, firm and steady, uterine discharge nearly suppressed; had taken her food regularly and with appetite; bowels had been opened once naturally during the day.

From this time she improved so rapidly, that on the 15th, she came down stairs; on the 24th, just a month from the time of the rupture, was at the wash-tub; and on the 2d of September, I met her in the street, when she told me she felt as well as she did before the accident.

CASE II. *Cæsarean section successfully performed for extra-uterine pregnancy.* By Drs. Bradley and Rogers, of Pineville, Alabama. New Orleans Med. and Surg. Journal, 1851.

DOCTOR HESTER—

Dear Sir: I send you, for publication, the following interesting case, the particulars of which were communicated to me by the gentlemen above named. There are several points connected with it, of great interest; and I would call attention especially to the large size of the child, and the extent of its connections with the parts of the mother. The gentlemen who had charge of the case deserve much credit, not less for skill in the treatment, by which, under very unfavorable circumstances, a favorable result was obtained, than for the operation itself.

Respectfully,

WM. M. BOLING.

The patient was a negro woman, 28 years old, of medium size, the mother of seven children. Dr. Rogers saw her first, on the 20th of June, 1849. She then seemed to be laboring under a very severe attack of colic, attended with constipation; she believed herself *pregnant, as she had not menstruated for six weeks*. The doctor treated her for similar attacks on the 29th of June, and on the 25th of August. Much difficulty was experienced each time in overcoming the constipation of the bowels. Again he saw her on the 1st of October, when she informed him that she had felt the motions of the child. The case now passed from under his charge, till the 10th February, 1850, when he was called, as was supposed, to deliver her. The patient thought herself in labor, and stated that she was in a great deal of pain. The os uteri was natural; she was not in labor. The breasts were flabby. She said that she had not felt the child move since the middle of November, 1849. She then had milk in her breasts. On the 15th of May, the doctor learned, through a member of the family, that she had menstruated several times, regularly as to periods, but profusely, and with relief.

On the 1st of February, 1851, Doctor Bradley saw her, with Doctor Rogers. The former gentlemen gives the following statement of her condition at that time:—

There was a large tumor filling the whole right lumbar region, extending above to the hypochondriac, and below to the iliac region, and somewhat to the left of the umbilicus. She was much emaciated, and had severe pains in the abdomen, extending also down her thighs. The tenderness of the abdomen was extreme. The tongue was coated slightly with a bluish fur, but was red at the edges. She had but little fever, however, the pulse being about natural in frequency, but small and feeble. She repeated, that when she was taken she had all the signs of pregnancy—cessation of catamenia, morning sickness, milk in the breasts, etc. She felt the motions of the child from the fourth or fifth month till the seventh or eighth, when she supposed it died.

Comparing the symptoms with the history of the case, we came to the conclusion that it was a case of extra-uterine pregnancy.

The propriety of a surgical operation being suggested, the consent of patient and master were readily obtained. The proceeding was deferred till the 7th, with the view of preparing the patient.

The patient being placed in a suitable position, was, as a preparatory measure, brought fully under the influence of chloroform. Doctor Bradley operated, making an incision to the peritoneum, commencing half an inch below the umbilicus, extending down the linea alba to within an inch and a half of the pubes. The peritoneum was next elevated with forceps, and an incision made through it—a step which was attended with some difficulty, as the head of the foetus was firmly attached to it. The incision was consequently extended two inches above the umbilicus.

We found the foetus in the right Fallopian tube; it was fully formed, about the size of a seven months' child, and would have weighed about five pounds. No decomposition had taken place, excepting a little in the brain. It was firmly attached to the peritoneum anteriorly, posteriorly and laterally, and to the uterus below, so that the epidermis of the child would separate in passing the finger round to detach it. In consequence of the extent and firmness of the connection, much time was consumed in the operation. The parts being carefully cleansed with a sponge, the edges of the wound were drawn together by four sutures, and adhesive strips, after which a bandage was applied round the abdomen. She was ordered an opiate.

The patient, on recovery from the anæsthetic stupor, had no knowledge of the performance of the operation. She was, however, sick at the stomach,

and vomited several times. She had a comfortable night; moderate fever was developed, but by careful treatment was subdued. On the 11th, the wound was dressed, and was found to be healing principally by the first intention. On the 16th, she was regarded as convalescent, and in four weeks from the operation she had entirely recovered.

CASE III. *Cæsarean operation performed three times on the same woman.* New Orleans Medical News and Hospital Gazette, 1854.

Madame Crémieau, a Jewess, born in the year 1788, affected with a very visible deformity of the pelvis, the result of a profoundly serofulous temperament, reached the end of her first pregnancy in 1812; the feet of the child presented. The surgeon having been called (the late M. Laurens), observed the embarrassment of the midwife, and at first thought it possible to extract the child by exercising traction on the feet. He, however, succeeded in extracting only the trunk and limbs. The head remained in the uterus, separated from the body. The putrid condition of the body rendered it probable that the fœtus had been dead some days. A second surgeon (the late M. Waton) was sent for. They then endeavored to bring the head down into the cavity of the pelvis, but this was impossible. Finally, the late M. Barjavel, Sen., was sent for. Having ascertained that several exostoses existed in the cavity of the pelvis, and that all the diameters were very small, M. Barjavel decided that the only way to relieve the patient was to perform either symphyseotomy or the Cæsarean operation. Taking into consideration the extreme deformity of the pelvis, he decided upon the latter. M. Barjavel made an incision along the linea alba, according to the established rules, and removed the head of the child with the rest of the cord and the placenta. Then he brought together the edges of the wound by the aid of sutures and adhesive plaster, and then passed a bandage around the body, and prescribed the dietetic regimen which her situation required. Notwithstanding the fact that the danger which would attend a future pregnancy was fully explained to her, she, at the end of a few years, was again pregnant. On this occasion the back presented, and the fœtus became impacted. This was on the 27th of February, 1815; the Cæsarean operation being the only plan of relieving her, M. Barjavel operated without hesitation. The child was removed at 5 o'clock in the evening, and lived until the year 1833. The wound was united, and the patient, contrary to the advice of her physician, suckled her child till it was weaned. The 22d of April, 1819, Madame Crémieau again became pregnant. On this occasion, the family employed a young surgeon, recently arrived from Paris. He adopted the method of Lauerjart (transverse incision on one of the sides of the abdomen). A dead child was extracted, and the patient expired shortly after the operation, from a violent hemorrhage.

We have no hesitation to condemn the method of Lauerjart; for if Prof. Simon, of St. Thomas's Hospital, London, recommends that *paracentesis abdominalis* be performed through the cicatrix of a previous operation (for he had a case of fatal hemorrhage, in which he punctured the abdomen at another point), the more forcible must be the necessity for making the Cæsarean section in the same place, to avoid bleeding.

CASE IV. *Cæsarean operation performed three times with success on the same woman.* Laneet, 1835, vol. xxviii.

In the German medical journal *Abhandlungen ausdem Gebiete der Geburtshilfe* (Ed. G. A. Michaelis), Keil, 1833, we find the following case, in which Drs. Zwaneck, Wiedemann, and Michaelis, were the operators, and which we now analyze and present to the English reader. The subject of the report

was a female, who had suffered so much from rickets and softening of the bones during childhood, that she did not commence to walk (and then moved only with difficulty) at the age of twelve years.

At the period of her second pregnancy her stature did not exceed four feet (Prussian measure), and the vertebral column was excessively curved at the lumbar region; the pelvis, when examined internally, appeared very much contracted from behind forwards; the antero-posterior diameter, from the lower edge of the symphysis to the promontory, was two and a quarter to two and a half inches, and that of the inlet was estimated at two inches. The cavity of the sacrum was not well marked, and the perineum was very small.

The course of the first pregnancy was regular, and labor came on at the end of forty weeks: as the head appeared to remain immovable above the inlet of the pelvis, the child was turned and the forceps applied, but without effect, and the assistance of another physician was required.

As the child appeared still to live, it was determined to perform the Caesarean operation, and in order to prepare the patient twelve leeches were applied to the abdomen, and she was ordered an emulsion containing some nitre.

The operation was performed on the following morning by Dr. Zwanck, June 18, by an incision which divided the linea alba. Dr. Seidel supported the parts exposed by this incision, with a cloth steeped in oil; one or two folds of intestine protruded near the lower extremity of the wound, but they were soon returned; an incision was now made into the uterus, and the child and placenta were extracted at the same time. A sharp hemorrhage from the division of the uterus was arrested by dropping cold water on it, and the organ became firmly contracted.

The child, a boy weighing about seven pounds, showed traces of recent death. The wound was closed with sticking-plaster, covered with charpie, and supported by a bandage. The treatment at first was strictly antiphlogistic, and half a grain of acetate of morphine was administered every day; by degrees a more strengthening regimen, bark, etc., was substituted. The discharge through the wound was moderate, and after three weeks it was completely closed; on the 20th of July, the patient might be considered as cured, and the menstrual discharge returned eight weeks after the operation.

Dr. Zwanck attributes the excellent sleep enjoyed by the patient to the use of the morphine, which thus contributed to prevent the development of various accidents.

The above-mentioned female became pregnant a second time, after a lapse of three years, and was brought to the lying-in hospital of Kiel, in December, 1829. Since the last operation it was manifest that the uterus was united to the parietes of the abdomen at the inferior portion of the cicatrix; and on the coming on of the labor pains, the extent of the union could be sufficiently perceived by the wrinkled lines produced in certain points; the diameter of this might amount to one and a half inches. Upon internal examination the foetus or its position could not be felt, but externally it was found that the buttocks lay upon the pubes. At the commencement of January (the last month of her pregnancy), the patient complained frequently of severe tension of the abdominal parietes. Enlarged veins were seen to cross the old cicatrix, the leech-bites partially opened, and one furnished a good deal of blood.

Labor commenced in the night of January, 1830. On the morning of the 21st the os uteri began to dilate, and at four o'clock P. M. its dilatation was about three fingers. The membranes now gave way, and a foot was distinguished. Under these circumstances the Caesarean operation was performed

by Dr. Wiedemann, who preferred making his first incision along the left side of the linea alba. The placenta immediately presented itself in the wound. This was removed, the left arm of the child was seized, and the infant itself was extracted as far as the head. A contraction of the uterus soon set in, and the head followed a gentle traction. The child, a female, seven pounds in weight, was born alive. On this occasion three points of suture were applied, according to Graefe's plan, a small pledget of lint was laid in the lower angle of the wound, and the whole was dressed with sticking-plaster, lint, etc. The progress of the wound now also was favorable, and in the beginning of March, it was all cicatrized except in a few small spots. The secretion of milk appeared during this time, and the child took the breast, but died on the 19th of February, from a species of endurcissement of the skin. Up to the middle of March a few points of the wound remained unclosed, and on examination there was found a fistulous orifice from which on pressure a little mucus-like fluid exuded. After several attempts to find the direction of the canal, the sound penetrated more than an inch into the uterus, which lay close under the cicatrix, and was firmly united to the integuments of the abdomen. Injections thrown into the fistula passed out through the vagina, and a muco-purulent fluid, in some quantity, also now came away through this channel. The fistula uteri resisted all attempts made to heal it, up to the patient's departure in March, although sometimes it appeared for a few days to be closed with a thin pellicle of skin. The whole anterior surface of the uterus now appeared to be united to the abdominal parietes, and the organ was so much drawn up that the os uteri could scarcely be reached above the pubes with the finger.

The third pregnancy took place in June, 1831. At this time the fistula was healed, and the patient had commenced to menstruate soon after her departure from the institution. She returned in March, 1832, and in the end of the same month labor set in, when M. Michaelis (for the third time) performed the Cæsarean operation. He made his incision on the left side of the second cicatrix, and extracted a male child weighing $6\frac{1}{2}$ pounds. The placenta was easily loosened and brought away likewise. A severe hemorrhage, which followed the removal of the placenta, was arrested by dropping water from a sponge moderately elevated above the wound. The latter was dressed in such a manner as to guard against future hemorrhage. The patient's state continued favorable, and on the 16th of May, only a few small points of the cicatrix were open, and these soon healed. The patient left the institution on the 27th, and since that time has continued to enjoy most excellent health.

CASE V. *Cæsarean section performed for the fourth time successfully on the same patient.* By Dr. Michaelis, of Kiel. Southern Med. and Surg. Journal, 1839.

An account of the three preceding operations, and of the case generally, is given in our second volume, p. 270. The first operation was performed in June, 1826, the woman being then in her twenty-ninth year; the second in January, 1830; the third in March, 1832. This woman became once more pregnant, and, the operation being equally necessary as before, it was performed by Dr. Michaelis, on the 27th June, 1836, after the patient had been in labor three days. The new incision intersected the second and third cicatrices, and the uterus has become so completely adherent to the abdominal parietes that the peritoneal cavity was not laid open. On the third day after the operation, the patient was threatened with alarming symptoms of peritonitis, accompanied by tympanites, which speedily yielded to the internal exhibi-

bition of ice and a few doses of calomel. The external wound could not heal, on account of the gaping of the uterine opening, which kept apart the adherent margins of the divided skin, and thus converted the wound of both integument and uterus into a single symmetrical aperture. On the 1st of August (the period at which the last report is dated), the uterine aperture was rather more than half an inch in extent; and this diminution appeared to be solely dependent on the gradual contraction of the uterus, inasmuch as the healing process itself was not then contemplated. Nevertheless, the patient left her bed daily, and her general health was good. She herself suckled her child, which was thriving well.

An interesting point connected with this case is the occurrence of peritonitis after the fourth operation, in which instance alone, it will be remarked, the serous sac was *not* opened, and was therefore unexposed to the influence of external agents, as the atmospheric air, etc.

A medical friend suggests the expediency, in cases of hopeless deformity of the pelvis, that the Fallopian tubes should be divided during the Cæsarean operation; in the event of a successful result to the operation, this proceeding would, of course, do away with all risk of a second.

CASE VI. *Cæsarean section successfully performed by a negress while drunk.* By Bennet Dowler, M. D., Editor New Orleans Med. and Surg. Journ., 1854.

The late eminent Judge Waggoman, many years ago a member of the Senate of the United States, informed me that an old drunken negress, who acted as midwife on his plantation, above New Orleans, on being called to a black girl during her first labor, which was natural, took a sharp knife, and without any reason to justify her conduct, laid open the abdomen and womb, and took therefrom a living child. The girl speedily recovered, with no other inconvenience except a slight incontinence of urine. The judge vouched for the accuracy of these facts, and pressed me to visit with him his plantation, that I might examine the girl, which, however, I had not then an opportunity of doing. He fell in a duel soon after.

CASE VII. *Cæsarean section made necessary by an immense ventral hernia.* By B. Harvey, M. D., of Richland, Mississippi. New Orleans Med. and Surg. Journ., 1853.

In July, 1849, I was requested by Mr. John Morrow to visit his servant Easter, who was about to accomplish the gestation of her eighth child. She had been in labor several hours; pains strong and regular. I made a per vaginam examination, without being able to reach the os uteri. An examination, externally, led to the discovery of an immense ventral hernia. The changes wrought upon the tumor during the pains, together with the fact first stated, forbade a doubt as to the nature of the case.

What was to be done? Here was an enormous pear-shaped tumor, with a pedicle so small as to preclude a possibility of delivery *per vias naturales*.

Determining at once upon the necessity of the knife, but unwilling to take upon myself the responsibility of so grave a measure, I administered a large anodyne, and requested an interview with Dr. Samuel Sample (a gentleman of high professional standing), who unhesitatingly concurred with me in the propriety and necessity of the Cæsarean operation.

Without detailing the particular steps in the operation, it is sufficient to state, that in the presence, and by the assistance of Drs. Sample, Harrington, and Tackett, it was performed in the manner usually recommended, without anything occurring worthy of special remark.

The fœtus was in a state of asphyxia, but was soon revived. The uterus, when emptied, contracted well. The wound was dressed in the usual way.

The child was taken from home and placed in a negro quarter, where it died in about eight or ten days, probably from want of proper attention.

The mother died at the end of three weeks from irritative fever, as I learned from the attending physicians, Doctors Foster and Harrington.

It may be proper for me to add, that about two years previous to the above history, this woman suffered a rupture of the uterus, and Dr. John Tackett being called, determined upon gastrotomy (as affording the only hope for mother or child), which he performed with his usual skill.

The woman's last misfortune was owing, I presume, to the peritoneum failing to unite after the last-mentioned operation.

CASE VIII. *Cæsarean operation on a dead woman; infant saved.* British and Foreign Medico-Chirurgical Review, 1844.

M. Loweg was called to the assistance of a pregnant woman, who had been long ill: she died very shortly after his reaching the house. The Cæsarean operation was immediately performed, and the child with the placenta was extracted without delay. It seemed on removal to be dead; but it had evidently continued to live up to the very moment of the mother's death. It was straightway put into a warm bath, and artificial respiration was steadily employed. After a quarter of an hour's perseverance with these means, the pulsations of the heart were first discoverable, and soon afterwards the child began to breathe. It lived for several months.

Remarks.—It is indeed very rare that an infant, extracted from the uterus after the death of the mother, has been known to live. It deserves to be generally known that, when such has fortunately been the case, the success has usually been owing to the steady use for some time of the means employed in the present case; viz. of the warm bath and insufflation of the lungs by applying the lips directly to those of the infant, and breathing warm air into its chest, thereby keeping up artificial respiration for a considerable period.—*Ibid.*

CASE IX. *Cæsarean operation after the death of the mother; the infant saved.* Lancet, 1830, vol. xvii.

D. E., ætat. 28, was admitted on the 2d of June, 1829. It appeared that she had been in the habitual enjoyment of good health up to the last four years, during which she had been laboring under all the symptoms of chronic bronchitis, which had ultimately terminated in phthisis. At the time of her admission, she was in the seventh month of pregnancy; she was much wasted, and complained of violent pains in the chest, great dyspnoea, frequent cough, with bloody and puriform expectoration. On the 17th of July, about seven o'clock in the evening, she was suddenly seized with hæmoptysis; the blood gushed from the mouth and nostrils, and she died before it was possible to give her any assistance, about four minutes after the commencement of the hemorrhage. Five minutes after her death, M. Huguier proceeded to perform the Cæsarean section, in the following manner: an incision was made through the skin and linea alba, and the peritoneum opened from below upwards. The parietes of the uterus having now been divided at its upper portion, the liquor amnii escaped with some force, and the child was extracted without any further difficulty. It was pale and motionless; the pulsations of the heart could scarcely be felt. The umbilical cord was tied before it was divided; hot frictions were made over the præcordial region, and air blown into the mouth; under this treatment, and the use of a warm bath, the pulsations

of the heart became stronger, respiration ultimately also took place, and at the time of the report, thirty days after the operation, the child was perfectly healthy.

CASE X. *Cæsarean section successfully performed by the patient herself.* Cooper's Surgical Dictionary by Reese.

In the year 1769, a negro woman (belonging to Mrs. Bland, a midwife), at Mr. Campbell's grass plantation at the Ferry, between Kingston and Spanish Town, in Jamaica, being in labor, she performed the *Cæsarean operation* on herself, and took her child out of the left side of her abdomen, by cutting boldly through into the uterus.

She performed this operation with a butcher's broken knife, about two inches and a half long—the part which joined to the handle. The position of the child was natural; she cut through near the *linea alba*, on her left side, and cut into the child's right thigh, which presented at the part, about three lines deep, and two inches and a half long. The child came out by the action of its own struggling. A negro midwife was sent for to her, who cut the navel cord and freed the child; and returned the part of the navel cord adhering to the placenta, and a considerable portion of the intestines also, into the abdomen, which had come out of the wound with the child.

The surgeon who attended the plantation was sent for, a few hours after the accident happened; and judging, from the situation in which he found her, that some dirt had been put into the wound, by the old midwife, with the intestines, he cut open the stitches that had been made, and carefully washed the parts clean, extracted the placenta at the wound, and then stitched it up again.

On the third day, after she had recovered from her low state from the loss of blood, which was considerable, a fever came on, which was removed by cooling medicines; she then took bark for ten days. The wound was fomented and dressed properly, and was soon cured; and the woman was well in six weeks' time from the accident, and able to go to her work.

The child died on the sixth day, with the *jaw-falling*, as it is called; but came into the world healthy and strong.

The woman continued perfectly well, menstruated regularly, and was with child again a year or two afterward. She attempted the same operation again; but was watched and prevented, and had a regular and proper labor. She had borne three children before this affair, all with natural and easy births. She was an impatient and turbulent woman, whose violence of temper was the only cause assigned for her conduct.

CASE XI. *Abdominal pregnancy; section of abdomen successfully performed.* Lancet, 1831, vol. xx.

Madame S. became pregnant, for the second time, in November, 1827, eleven years after the birth of her first child. At the expiration of five weeks, an elongated tumor was perceived in the umbilical region. Towards the end of March, 1828, Madame S. was considerably reduced by repeated bleedings from the vagina, which were preceded in some instances by fainting. The uterus and its neck were found in the condition which they generally present at the fourth month of pregnancy. A painful tumor, as large as an egg, was detected a little above Poupart's ligament, on the left side. As this was attributed to enlargement of the ovary, frictions with iodine were used, but soon discontinued, on account of the salivation produced by this remedy. At the seventh month, Madame S. was compelled to confine herself entirely to bed, and it was now discovered that the fœtus was contained in the cavity of the

abdomen. The abdomen was uniformly distended, and slightly elevated towards the umbilicus. From the great degree of emaciation to which the patient was reduced, the motions of the fœtus were distinctly perceived through the abdominal parietes, and its position was recognized. The body of the fœtus lay transversely, the head directed to the right side; the os uteri, at this period, was not easily found; it pointed backwards and to the right side; the pelvis was filled with an elastic mass (the intestines) which gradually increased in size. Every motion of the fœtus caused acute pain, and the patient was afflicted with painful eructations, constipation, vomiting, and uneasy sensations in the belly and loins. Her emaciation now increased, and hectic fever began to show itself; this was alleviated by opium, bark, and bitters. The natural period of gestation being now nearly complete, Dr. Zais proposed the operation of gastrotomy, to which the other physicians did not consent. On the night of the 18th of August, the convulsive motions of the child were extremely strong and violent, and were immediately followed by bearing-down pains, with some discharge of blood from the vagina. It would appear that the child died in consequence of these convulsions, for no further motion was felt; the abdomen became cold and flattened. The operation, which, under these circumstances, would have been undertaken, was deferred on account of an attack of fever, accompanied by pain in the loins and abdomen, and causing considerable prostration of strength. It was performed on the 12th of October, eight weeks after the death of the child, in the following manner: An incision to the extent of six inches was made through the abdominal parietes, reaching from the region of the spleen to the umbilicus; this laid bare the peritoneum, adhering closely to the cyst, which contained the fœtus. On opening this cyst, the walls of which were about two or three inches in thickness, a yellowish, fetid fluid escaped. The child, a male infant, fully formed, was now extracted without any difficulty; several parts of its body, the umbilical cord, and membranes, were in a state of putridity. The internal surface of the cyst was now seen, smooth in appearance, resembling serous membrane, and the placenta was found attached to the vertebræ, between the arch of the stomach and the umbilicus. Being firmly fixed, no effort was made to remove the placenta, but the wound was immediately closed with sutures and adhesive plaster. All pain had disappeared; an abundant secretion of healthy pus was established, and on the sixteenth day after the operation, the wound seemed to have closed altogether. Madame S. now experienced an attack of pain something similar to labor-pains; in a few days the inferior portion of the incision opened, and from time to time a fetid sanies, containing membranous concretions, was discharged. At length, in the spring of 1827, the wound was perfectly cicatrized, and Madame S. recovered her health and strength in the most perfect manner.

CASE XII. *Extra-uterine foetation; abdominal section; both mother and infant saved.* By Dr. Zwanck, of Hamburg. *Lancet*, 1838, vol. xxxiv.

On the 15th of September, 1837, Dr. Zwanck, of Hamburg, was called on to attend a female, who had experienced labor pains for the last three days; on examination he discovered an extra-uterine pregnancy. Gastrotomy was performed on the following day; an incision, five inches in length, was made along the linea alba, and the chorion exposed, which presented a tendinous appearance; the membranes were now divided, and the fœtus brought into view, but the incision was found to be too small to admit of its extraction; the opening of the abdominal parietes was, therefore, enlarged by half an inch, when the fœtus was removed without difficulty; in a few moments more, the placenta presented between the edges of the wound, and was also extracted.

The wound was united by five sutures, and after a lapse of three weeks the woman was perfectly well. The child also survived, and at the time of the publication of this case, was a strong, healthy boy.

CASE XIII. *Simulated or phantom tumors.* By Drs. Addison and Gull. London Medical Times and Gazette—Medical Examiner, 1854.

Among the circumstances which combine to make the investigations and diagnosis of abdominal tumors difficult, is the existence of a class in which the symptoms are so changeable that it becomes almost impossible to decide whether or not any tumor does exist. The signs are present one day, entirely absent on another, then present again, in a most perplexing manner. Every practitioner of experience must have met with such puzzling cases; but to those who have not, it would be impossible to convey any idea of the degree to which they sometimes simulate real tumors. Dr. Bright, in his papers on Abdominal Tumors, in the Guy's Hospital Reports, mentions a case in which, in an hysterical woman, the surgeon had been induced to attempt ovariectomy, believing that an ovarian cyst was present. The incision having been made, no tumor whatever could be found, and the operator was obliged to desist. The woman fortunately recovered, and the tumor at a subsequent period again made its appearance.

One of the earliest allusions to this deceptive class of cases was, we believe, by Dr. Bright; and in the wards of Guy's Hospital they have since been the subject of much investigation. Our own knowledge of them has been chiefly derived from the clinical observations of Drs. Addison and Gull, under whose care several very instructive cases have occurred during the last few years. To the latter gentleman it is, we believe, that the affection is indebted for its very appropriate name of "phantom tumor." We shall attempt in the following sentences a short summary of such facts as have been made out respecting them, but shall not occupy space with the details of cases, as the disease is one in which the prominent symptoms, from being essentially unreal, are interesting rather to the manipulator at the bedside than to the reader of notes. Dr. Bright's allusion to the subject, to which we have referred, is as follows. In speaking of reported cases of disappearance of ovarian cysts, that experienced physician states: "It is even possible that a certain number of these cases may be set down as instances of erroneous diagnosis: for there is no question that the diagnosis is not always obvious. There is one class of cases more particularly liable to lead the unwary and inexperienced into error respecting the disappearance of an abdominal tumor;—I mean cases of hysterical distension of the bowels; for, although the swelling in these cases is essentially tympanitic, yet occasionally, from the singular way in which the intestines are partially distended, and remain so for days and weeks at a time, they sometimes give completely the forms of tumors; and sometimes even indistinct fluctuation may arise from fluid feces, or even from the coexistence of a distended bladder; and sometimes the large accumulation of hardened feces has led to a belief of a more solid tumor." To state them *seriatim*, we have then the following, as the chief conditions on which these variable tumors may depend. 1. Distension of the bladder. 2. Solid fecal accumulations. 3. Irregular contractions of the intestine at two points, and distension of the intervening portion, with flatus or with fluid feces. 4. Spasmodic rigidity of a part of the abdominal parietes. It may, perhaps, seem almost superfluous to add the last, but practically, it is one of the most frequent sources of deception. An hysterical patient is quite capable of making a circumscribed portion of the abdominal wall rigid and hard, while the rest remains comparatively flaccid; and even in a person of calm nervous system the

same condition may be produced by an instinctive reflex act, for the protection of a part of the belly which is tender on pressure. The recti muscles are peculiarly apt to be the seat of these contractions, which may, however, also occur in the lateral regions of the abdomen. It is rare, perhaps, for any one of the above mentioned causes to exist singly and uncomplicated by any of the others. Neither of the first two, indeed, unless exaggerated by one or other of the latter, could probably rank as a "phantom" tumor. Hardened masses of feces are probably, however, the most frequent of the exciting causes of the affection. By the irritation produced by their lodgment, the intestines are made to contract irregularly, and local tenderness is also induced, which latter, in its turn, acts as an excitant, in producing reflex rigidity of a part of the abdominal parietes. It has been observed of phantom tumors, that they are much more frequent on the right than the left side, and that not rarely there are present in connection with them indications of renal irritation. Both of these circumstances are probably to be explained by reference to the facilities afforded by the cæcum and ascending colon for the delay and accumulation of scybalous feces. The period of early adult life would appear to be the one most liable to the development of this chain of symptoms. The simulated tumor in question is by no means met with only in the female sex, some of the most marked examples of it that we have seen having been in young men. As it regards treatment, that should of course be modified according to the peculiar circumstances of the case. A brisk purgative will probably be a remedy almost always useful, and afterwards a course of nervine tonics, or perhaps of antispasmodics, may be exhibited with benefit. The chief importance of the cases is in the lesson they convey as to the necessity for great caution before pronouncing positively as to the existence of an abdominal tumor. The surgeon should always be content, in doubtful cases, to examine his patient, on several separate occasions, before venturing an opinion. In most cases, probably, the careful employment of percussion and palpation will be competent to decide the question correctly; but if there be the least doubt remaining, the diagnosis should be deferred until, after the free action of a purgative, a second examination has been instituted.

We have introduced the above remarks in this part of the series, among the examples of tumors resulting from accumulation of inflammatory products, because it is for such that these fictitious enlargements will generally be mistaken. Cases of typhlitis are perhaps those with which, more especially, they are likely to be confounded, and, next to them, tumors springing from the kidney or abscesses in that organ.

CASE XIV. *Operation for supposed ovarian tumor; none found.* By Dr. Dohlhoff. *Lancet*, 1838, vol. xxxiv.

F. G., 23 years of age was received into the hospital on the 12th of Nov., 1835, for abscess in the neighborhood of the knee-joint. After remaining some time under treatment she became incapable of passing her urine, and the retention was so complete as to require the constant application of the catheter. She now complained of pain in the lower part of the abdomen, and at this point a tumor became developed which gradually filled nearly the whole of the abdominal region below the umbilicus, giving rise, in addition to retention of urine, to obstinate constipation. The latter was so difficult to overcome that three drops of croton oil produced only a single stool, and the same dose was repeated daily for four days without giving rise to a second evacuation of the bowels.

Various remedies were ineffectually tried up to the 10th Sept., 1836; the

tumor of the abdomen continued undiminished, and on a consultation being held, it was determined to extirpate the diseased mass with the knife.

On the 19th of September the author proceeded to lay open the cavity of the abdomen, in the presence of his colleagues and pupils; the bladder having been emptied by the catheter, an incision five inches in length was made through the linea alba, and the hand introduced into the abdomen, but *no trace of the tumor remained*; it had disappeared while the operator was dividing the abdominal integuments.

It is unnecessary to say that the wound was closed as quickly as possible, and the patient carried to bed. On the day after the operation both the urine and feces were passed without any difficulty, and the patient had the good fortune to recover in the course of a few weeks.

The author concludes this instructive case by declaring his opinion that what was mistaken for a diseased ovary was nothing else than a spasmodic affection of the intestinal canal, causing retention of gas and thus simulating the appearance of a tumor.

CASE XV. *Abdominal tumor simulating pregnancy.* By John Challice, Esq., of Bermondsey. *Lancet*, 1847.

On the morning of the 12th of August, 1846, a messenger came to me, breathless, saying that her mistress's daughter was dangerously ill with the cholera, and that I must come directly. On my way, the maidservant dropped several hints, at first rather obscure, afterwards of a less doubtful character. "She hoped it was nothing worse than the cholera;" and persons who had their living to get "could see, although they dare n't say nothing." These innuendoes, conveyed in a tone and manner not to be mistaken, led me to the conclusion, that on my arrival I should find the patient in the pangs of parturition. When I arrived, I saw a young female in bed, lying on her right side, with her face buried in the pillow, and the knees drawn up towards the abdomen. She seemed to be in pain, but was sullen, and refused to answer any questions. The mother told me that she had been vomiting and complaining of pains in the loins, with a constant desire to pass water, and that for the last five or six months she had observed a change in her daughter—the appetite capricious, temper irritable, and on several occasions she had been surprised in tears; notwithstanding, she denied being ill, and continued to perform her domestic duties. These facts seemed confirmatory of the servant's suspicions, and with almost a conviction in my mind of the condition of the girl, I placed my hand upon the abdomen: it was tense and swollen, and a movement like that of a living fœtus was distinctly felt; I then listened and detected a loud and quick pulsation.

The presence of these symptoms induced me to pronounce the patient pregnant. No suspicion had entered the mother's mind: she was an only daughter, and bore an excellent character. However, she did not deny the fact, but after a distressing burst of grief and a pitiable appeal for forgiveness, she confessed that her "Cousin John had had connection with her once, and only once, about six months before, a few days previous to his departure from England." Being unwilling to aggravate the sufferings I then witnessed, by what appeared unnecessary inquiries, or to disturb the patient by further and more careful examination, considering the case quite decisive, I contented myself with prescribing some simple remedy for relieving the sickness and pain. The next day there was a great improvement in the condition of the patient; the fear of discovery no longer agitated her, and she had been forgiven. Up to this period she had so contrived to compress her figure, that no increase in her bulk was perceptible when dressed, although her size was quite that of

the sixth month of gestation, when undressed. Now that this cruel mental and physical restraint no longer tormented her, she suffered less from pain and sickness, became less sullen, and more communicative.

It appears that the connection took place, after prolonged resistance, just previous to the usual period of menstruation; that up to that time there had never been the least irregularity of this function during the three years she had menstruated.

She was greatly alarmed at the absence of the accustomed appearance at the usual time, and did not feel well in health, although she had no marked symptoms; a general sense of uneasiness, with pains in the loins, and an occasional slight feeling of sickness and loss of appetite were felt. When the next period came round, she was pleased at finding herself "unwell," but only to about half the usual extent; menstruation had continued regularly up to the time I saw her; on each occasion, however, more and more scantily. The abdomen had gone on gradually increasing in bulk, and about five months after the connection the patient was conscious of a movement and pulsation in the abdomen, and believed herself pregnant. The breasts were small, and marked with an indistinct areola; around the eyes and mouth there were dark circles, and her mother says she is much fallen away in flesh. Previous to this unfortunate occurrence, the patient not only enjoyed good health, but was remarkable for strength, endurance, and activity, inclined to *embonpoint*, full of life and spirits, and in her nineteenth year.

During the next month or six weeks, I saw the patient occasionally. She complained of no urgent symptom, walked out now and then, had a good appetite and digestion, with sometimes slight irritability of the bladder, and irregularity of the bowels. The gradual increase in size still went on, and the mother (who now slept with her daughter) said that the movement of the child continued. The patient complained of its violence when in bed, and also began to suffer from lumbar pains, and constant irritation of the labia, which was much increased when she drank beer, wine, or spirits. And so the case went on.

When the ninth calendar month had nearly expired since the connection, I became much interested in the case, thinking it one in which the period of gestation could be accurately ascertained.

On the evening of the expiration of the ninth month, I received the expected message, with an urgent request to hasten, as very strong labor had come on. When I arrived, the patient was standing at the foot of the bed, grasping the bed-post, and evidently suffering from pain, although not of a violent character. There was an interval of about ten minutes between the pains, during which she walked about the room, having a very anxious and haggard look.

After a good deal of persuasion, she consented to an examination per vaginam, which seemed to cause excessive pain, as she screamed violently, and exclaimed that she was being murdered. At the time I thought the patient hysterical, but was much surprised at the narrow constricted condition of the vagina, and the presence of the hymen nearly perfect; the agony, however, produced by the examination seemed so intolerable, that the patient, by a sudden and violent effort, threw herself from me, declaring that I should torment her no more.

Finding that the pains were weak and ineffectual, and at longer intervals, and feeling assured, from the condition of the parts, that immediate labor was not at hand, I gave twenty minims of opium, and left, directing a full dose of castor oil to be given in a few hours. During the night she slept well; the oil acted freely in the morning; and the next day passed over without

pain or any inconvenience, the patient having a good appetite and being in better spirits. About eleven o'clock at night the pains returned with increased violence, and I found her straining and bearing down at the bed-post. An "old-experienced" nurse declared "that the pains were quite strong enough, with assistance, to bring the child into the world." The mother states, that during the night she had placed her hand on her daughter's stomach, and felt the child move vigorously.

In the intervals of pain, the patient walked about the room, and was cheerful, except expressing what seemed an unreasonable horror at any examination. The pains commenced in the abdomen, and then extended around to the loins, came on regularly every ten or fifteen minutes, and were marked with all the characteristics of labor in its first stage.

The extreme excitement and dread which the patient evinced when the necessity for an examination was impressed upon her, induced me to waive it, although I was anxious to ascertain the real condition of affairs. It would be useless to detail the diurnal symptoms—suffice it, that a week passed over, and matters remained apparently without alteration, either one way or the other. I may here state, that menstruation did not take place at this period. Doubts now first began to arise in my mind about the nature of the case, and when nine calendar months from the departure of her cousin had expired, I became very anxious about it. It was at this stage that Dr. Lever was consulted. After a careful and thorough external and internal examination, this gentleman, justly famous for his skill and tact in diagnosis, having the history of the case before him, came to the conclusion that it was "extra-uterine impregnation." At that time her physical condition was as follows: Countenance pale—an anxious expression; eyes rather sunken; nose pinched; breasts somewhat flaccid; abdomen the size of mature pregnancy, if not larger; pulse never less than 100; the tongue clean, but morbidly red; bowels sometimes costive for a day or two, at other times the reverse; urine most frequently pale and copious, but on some occasions thick, scanty, and high-colored. Over the entire abdominal region a distinct pulsation could be heard and felt; but owing to the extreme excitability of the patient, it was almost impossible to ascertain whether or not it was synchronous with the pulse. Palliative measures were adopted, and the case, now become one of painful interest, was closely watched. During the next fortnight no perceptible alteration occurred, except that the pulsation in the tumor became less distinct, and the abdomen more tense. Dr. Ferguson now visited the patient, and pronounced the abdominal pulsation to be synchronous with the heart's action, and doubted whether impregnation had taken place at all. On his recommendation, I punctured the abdomen with a fine "trocar," and drew off about five pints of thick grumous and offensive matter. Great relief followed the operation, only, however, temporary; for in the course of a short time, the abdomen became as tense as before, and all the patient's sufferings returned. The interest, in a further detail of the symptoms of this case, here ceases, no doubt now being entertained of its character. After a second and a third tapping, the poor girl gradually got weaker and weaker, her only comfort the oblivion produced by anodynes; and on the 15th of February she died.

The day following, assisted by my friend, Mr. Druitt, we made a *post-mortem examination*. The upper portion of the body was extremely emaciated, but, owing to slight œdema of the lower extremities, this appearance was not general. Abdomen greatly distended, and marked by enlarged veins; it measured in circumference fifty-eight inches. About a gallon of fluid was drawn off by the trocar, previous to making a free incision, after which,

nearly a pailful of brain-like matter rolled out. This had been contained in a cyst, which extended from the pubes to the ensiform cartilage, and from the left to the right hypochondrium; in some parts, the walls of the sac were more than an inch thick, and of a fibro-cartilaginous consistence; the anterior portion adhered firmly to the abdominal parietes, the upper being formed by the inferior surface of the liver; that organ was bathed with the contents of the sac, and became inoculated, several small cysts, filled with medullary sarcoma, having formed in its substance. There were also many isolated cysts, varying from the size of a hazel-nut to that of a pigeon's-egg, formed in the walls of the cyst; these had no connection with each other, or communication with the general cavity. The uterus was found imbedded in the lower portion, or base of the cyst; no trace of the ovaries could be met with; the bladder was small, but not affected by disease.

The peculiar interest of this case arises from the close resemblance to the symptoms of impregnation; the development of a malignant disease, seeming, in a great measure, to be influenced by the feelings or instinct of the patient. Would the girl have died, had no connection taken place? How far did the mental and physical excitement act upon the origin or the progress of the disease? Or was it completely independent, and its course inevitable?

CASE XVI. Operation for simulated ovarian disease; a large tumor successfully removed from the mesentery. By P. J. Buckner, M. D., of Cincinnati, Ohio. *American Journal Medical Sciences*, 1852.

The subject of the following case was under the care of G. E. Eels, M. D., of Lithopolis, Ohio. It was looked upon as a case of ovarian disease; and, believing it a favorable one for extirpation, the patient was so informed, and advised to consult G. W. Boerstler, M. D., of Lancaster. Mr. Tegarden accordingly took his wife to see Dr. Boerstler, who, upon examination of the case, concurred in the diagnosis given by Dr. Eels, and also advised its removal. Through him I was subsequently consulted by letter, and requested to undertake the operation.

Dr. Eels furnished me the following history of the case:—

"On the 15th of April, 1849, my attention was first called to the case of Mrs. Tegarden. I found her in the enjoyment of excellent health, the mother of eight children, the youngest six months old. She informed me that, soon after her last confinement, she had discovered a small tumor within the abdomen, which was increasing in size, but up to this time gave her no particular inconvenience. On making an examination, I found the tumor as had been represented, within the abdomen, about the size of an orange, occupying a central position directly above the pubes. It was movable in various directions, insensible to pressure, surface smooth.

On examination per vaginam, I became convinced it had no attachment to the uterus, but could not satisfy myself in regard to its nature or connections. How long it had existed, she could not tell; and as she had been attended by an ignorant midwife in all her confinements, nothing could be learned from that source.

She was put upon the use of iodide of potassium internally, with an occasional laxative, and the iodo-mercurial ointment externally. These agents were continued some months, from the use of which she fancied some diminution of the tumor took place. I was satisfied, however, that such was not the case, although it did not increase to any appreciable extent. Some time in the month of April, 1850, she became pregnant, and owing to the irritability of the stomach all medication was suspended.

During the first months of gestation, the patient enjoyed a usual degree of

good health, but the latter part of the period was one of continued suffering, from frequent attacks of colic. Some of these attacks were extremely severe, threatening a speedy termination in death. She, however, suffered on to the end of the term, and on the 11th of January, 1851, after a natural and easy labor, gave birth to a full-grown, healthy, male child.

The morbid tumor was, during gestation, easily felt above and to the left of the uterus. After her confinement, the tumor was discovered to have very much increased in size, and was troublesome both on account of its weight and the obstruction which it occasioned in the intestinal tube, for attacks of colic, although not as severe, were still very distressing. By its pressure upon the fundus of the bladder, the functions of that organ were also deranged.

Under these circumstances, being convinced that the only reasonable hope of relief was a resort to an operation for the removal of the tumor, the patient was referred to my much valued friend, Dr. Boerstler, of Lancaster, for further advice. The doctor's views of the case coincided with my own; and at his suggestion, and by mutual arrangement, the case was reported to yourself, with the request that you would operate, if you should concur with us in thinking it advisable.

The patient has been made fully aware of the dangers and uncertainties attending such operations, and is extremely desirous that the operation should be performed, provided her medical advisers think her case affords as reasonable a hope of success as the majority of such cases."

Not having seen the case, but having the utmost confidence in the medical skill of my worthy friend, Dr. Boerstler (at that time having no acquaintance with Dr. Eels), I addressed a letter to the former, advising that the patient be put under suitable treatment to prepare her for the operation; that, when in a proper condition, if notified, I would visit the lady, and if I should, on seeing her, concur with them in the character of the disease, and deem an operation practicable, I would operate.

The patient was, on the 9th of September, put upon a preparatory course of treatment, consisting of low farinaceous diet, with an occasional laxative composed of blue mass and comp. ext. colocynth, which was continued up to the time of the operation.

I visited and saw the lady for the first time on the 3d of October, 1851. On *external examination* I found a firm, rather elastic tumor, in the abdomen, in feel and appearance about the size of a man's head, occupying rather a central position, but rather more prominent on the left side. It was smooth and spherical, and freely movable in every direction, with very little sensibility manifested on pressure. From the freedom with which it could be moved and pushed into either side, or elevated and depressed by the hand, I felt justified in the conclusion that there were no very firm adhesions, if any.

On *examination per vaginam*, I found the uterus of normal size, and *in situ*, easily moved from side to side by the index finger, apparently having no connection with the tumor; which, however, could be felt through the walls of the vagina, above and anterior to the uterus.

After a careful examination of the case, I confess I was led to concur with the attending physicians in the opinion that it was ovarian in character, and presenting as favorable a case for operation as is usually met with, and so expressed myself to the patient and her friends. At the same time, I informed them of the uncertainty which attends the diagnosis of such cases, the difficulties attending the operation, as well as its danger, and the uncertainty of success. I further remarked to the patient and her husband that I would not advise the operation, but, if she desired it, after having been made fully aware

of its magnitude and hazard, I would operate. She remarked that her attending physician had apprised her fully of the character and danger of the operation, and that she had made up her mind to have the tumor removed.

Operation.—On the next day, the 4th of October, 1851, I proceeded to the operation, in presence of Drs. G. E. Eels, Boerstler, Minor, Potter, and several other medical gentlemen. The patient, after being suitably dressed, was placed upon a table, her head and shoulders supported by pillows, and her feet resting on two chairs. Dr. Eels administered chloroform; when fully under its influence, the abdomen was divided in the linea alba, from the umbilicus to the pubes, by an incision of nine inches; the peritoneum being carefully divided, the tumor was brought to view; when, to our surprise, it was discovered that the tumor was in the *mesentery* between the laminae of the peritoneum, and surrounded by the small intestines. Here was a state of things requiring sound discriminating judgment, and cool deliberate action, and certainly involving great responsibility. I need not tell the reader that no one felt it more than myself. I remarked to my medical friends, and in the presence of the husband, that we had before us a much more formidable case than we had anticipated; that, in removing the tumor, the intestine must be dissected from its connection with the mesentery, twelve or fifteen inches, and great and extensive injury be done to the peritoneum; that numerous bloodvessels would be divided, and the hazard to the woman's life greatly increased beyond the common operation of ovariectomy, if she could by possibility recover at all. And I suggested that it was a grave question of duty we had to decide, whether we should close up the wound in the abdomen and leave the woman to her fate, or proceed with the operation and remove the tumor.

The husband, with great firmness and decision, replied: "*Gentlemen, I have neither advised nor opposed the operation, but have left it entirely to my wife, who determined to have the tumor removed; as you have gone thus far with it, and she cannot now be consulted (being unconscious from the action of chloroform), it is my wish that the tumor be removed.*"

It was decided that the operation should proceed. An incision was made through the peritoneum, about an inch from the intestine on each side, and parallel with it, which divided numerous small vessels, that bled freely. These incisions were each over twelve inches in length. With the aid of the thin edge of the ivory handle of my scalpel, I separated, rather rudely, the peritoneum and intestine, between those incisions, from the fibrous sac of the tumor, to the extent of at least twelve inches. By this procedure the bleeding from the numerous small vessels was prevented. The intestine being now freed from the tumor, I next, in a similar manner, separated the laminae of the peritoneum on either side of the tumor, from the parallel incisions backwards towards the root of the mesentery; when, on its posterior surface, I found a considerable branch of the superior mesenteric artery entering the tumor, and supplying its nutrition. This was secured by ligature, divided, and the tumor removed. Several small arteries required to be ligated; the parts were sponged as clean as practicable, the detached intestine was folded as the link of a chain, so as to bring the raw surfaces of the intestine and peritoneal margins in contact, and the omentum majus brought down over it to hold it *in situ*. The abdomen was closed by five interrupted sutures, supported by adhesive strips, covered by compress and bandage, and the lady placed in bed.

The whole operation did not exceed thirty minutes; the patient was not restored to consciousness until after she was placed in bed; and was wholly unconscious of pain during the entire operation.

I left the patient in the afternoon in the care of her family physician, Dr.

Eels, who kindly furnished me the following history of the subsequent treatment and symptoms of the case :—

"The prostration following the operation was very great. Pulse remained small and very feeble through the day, with cold extremities. Gave her nitrous ether twenty drops, tinct. opii five drops every hour, and applied dry warmth to the extremities. At 9 o'clock P. M. the patient began to revive, and at 10½ she slept quietly one hour. She awoke much refreshed, and was comfortable the remainder of the night; suspended nit. ether and tinct. opii."

We epitomize the after-treatment of this truly most hazardous operation.

"Oct. 5. Pulse 100; emptied bladder; ordered toast-water; tincture of opium if restless. 6th. Still pretty comfortable; bladder emptied three times, twice by catheter; urine of high color; abdomen not tender or swollen, but complains of darting pains. Ordered iced water to abdomen, and laudanum. 7th. Had a good night; thirst urgent; abdomen slightly tumefied, but without pain; continue ice and iced-water, also tinct. opii; during evening, a warm water enema. 8th. Patient had rested well; bowels moved; urine drawn off; no tenderness of abdomen; removed dressings; no adhesion of integuments; treatment continued. 9th. Good night; doing well; has urinated. 10th. Nothing special; removed two lower sutures; dressed wound with plasters, edges adherent. 11th. Took ʒij sulphate magnesia every three hours until bowels were moved, and this action to be hastened by an enema of warm water. The next day the bowels were moved naturally. Not much adhesion yet, but patient comfortable and allowed more nourishment. Patient continued slowly to improve. On the 17th, a small opening was made in the lower angle of the wound, from which escaped two pints of decomposed blood. After this the symptoms became more favorable, and by the 26th, some twenty days after the operation, she was up and attending to her household duties, the wound having entirely healed."

When we take into consideration the tissues involved, the terrible and extensive lesions in the peritoneum, the extent to which the intestine was detached from the mesentery, as well as the division of numerous bloodvessels so freely anastomosing with each other, as the arteries of the mesentery, it certainly presents a case, if not without a parallel in the annals of surgery, at least one of rare occurrence. It shows, in a remarkable degree, the power of nature to repair injuries.

The most remarkable feature in the case is that the bowels should maintain their integrity of function; that so extensive a lesion of the chyloferous vessels should be followed by no disturbance of the nutritive functions; so far as can be judged of from her general health it remains unimpaired. In truth, she recovered in as short a time, and with as little suffering as patients generally do who have undergone the operation of ovariectomy.

CASE XVII. *Operation for a phantom tumor; patient recovered.* By Henry H. Smith, M. D., Prof. of Surgery in the University of Pennsylvania. Medical Examiner, 1855.

Maria W., aged 23 years, of sanguine temperament and considerable *embonpoint*, weighing about 155 pounds, was born in the interior of Pennsylvania. At the early age of 14 she ran away from home, and lived with her seducer until she bore him two children. Being soon after deserted by him, "she lived upon the town," and on one occasion was said to have submitted to the embraces of thirteen men in a few hours. She has had four children, only one of whom is alive; had one child delivered by the operation of embryulcia, and has repeatedly suffered from syphilis, for which she was treated in the hospital. On one occasion she was found to have nine distinct

chaneres on the neck and mouth of the uterus. It was soon after this visit that she again became an inmate of the hospital, on account of severe abdominal pain and swelling, for which she was repeatedly cupped, blistered, etc., the marks of which are yet very apparent. This visit she thinks was about eight months since, but she has no distinct recollection of the period "when the lump first appeared; though different physicians in the city had treated her for the lump, and she had spent all her money in trying to get rid of it" before she came to the hospital. Such was her history up to the period of my visit, except that "her doctors always told her she had a lump like her sister." This sister had a tumor in the abdomen, of which she died in about 12 months, and on being examined after death, the tumor was found to be filled with water, and hence her anxiety to be operated on promptly.

After receiving this account, I made a most careful examination, and found the following condition of things:—

Present condition.—General health fair, strength good, countenance intelligent, but expressive of temper, which is excessive; limbs round and full, but without oedema; pulse natural; abdomen very tumid, especially on the left side of the umbilical, as well as the left hypochondriac and iliac regions, where a globular tumor of the full size of an adult head is perceptible: the skin over the tumor is dark colored and marked by cups; no wrinkle of skin from former pregnancies, owing to the general abdominal distension, which is equal to that of six months' pregnancy; pressure on the left iliac region causes pain; indistinct sense of fluctuation in the tumor and also in the abdomen. Umbilicus quite prominent, and resembling the appearance of a small irreducible umbilical hernia.

The tumor on the left side of the abdomen is irregular on the surface, though not lobulated, is *flat on percussion* when the patient lies on her back, but less dull when she lies on her right side. When placed on her right side the tumor falls considerably to the right of the linea alba, and is also movable in its pelvic connections. The solidity and mobility of the tumor were therefore undoubted.

As Maria was suffering much from hemorrhoids, no examination was made per rectum, but that per vaginam showed a marked prolapsus uteri, with great tumefaction of the neck and eversion of the os. There was also considerable fulness of the anterior and left wall of the vagina. The bladder exhibited considerable irritation, and required the frequent use of the catheter, the difficulty in micturition being apparently due to a tumor within the pelvis which depressed the womb and thus acted on the bladder.

In this examination several of the resident physicians and one or two others participated. Knowing the difficulties attendant on the diagnosis of ovarian tumors, I made in all four very careful examinations of the patient, and became satisfied that the tumor was ovarian, that it was comparatively free from adhesions, that it was the cause of her vesical and rectal distress, and that the attempt to remove it was justifiable under the circumstances. In this opinion my colleagues Drs. D. Hayes Agnew and A. B. Campbell fully coincided. After due preparation, and after a full explanation to the patient of the dangers of the operation, and the probability of our not being able to relieve her, no change was made in her anxiety to submit to it, and she was accordingly prepared therefor by moderate purging with pills of inspissated ox-gall; the bladder evacuated; the pelvis surrounded by a large diaper and an anæsthetic (ether 5 parts, chloroform 1) administered. Whilst these arrangements were being effected in the ward, I explained the character of the complaint and the operation about to be performed, to the large class in attendance, stating that the greatest difficulty in all such cases was the in-

ability of the surgeon to make a positive diagnosis before opening the abdomen.

Operation.—The patient now being placed on the operating table, in a perfect state of anæsthesia, the attention of the class was called to the tumid condition of the abdomen generally; to the apparent existence of a slight umbilical hernia, and to the size and position of the ovarian tumor. Whilst all her muscles were thus relaxed by the ether, I, however, thought that the tumor was not so prominent as it had appeared to me on a former occasion, but as this was deemed by all near the table to be due to the absence of the compression made upon it by the contraction of the abdominal muscles, and as the tumor was yet perfectly distinct and movable, no importance was attached to the observation. Accordingly, I proceeded to operate, assisted by Drs. Agnew and Campbell, and Drs. G. B. Smith and Braxton, and others of the house physicians. Commencing a little to the left of the umbilicus, I divided the integuments to the extent of eight inches, terminating within an inch of the pubes. On carefully dividing the tendon of the external oblique muscle, my finger touched the peritoneum, the linea alba being deficient, and the recti muscles separated at the umbilicus to the extent of one inch and a-half by the great abdominal distension. On carefully incising the peritoneum, the omentum majus was found fully spread out over the intestines, thickened to nearly a half inch, and filled by a lump-like and fatty deposit. It was also adherent to all the surrounding parts. After destroying some of the adhesions, the hand was passed into the left iliac region to feel the base of the tumor, when the ovary was discovered to be sound, though the uterus was somewhat, though not considerably, enlarged. As the tumor yet apparently existed beneath the abdominal parietes, the hand was carried more towards the left hypochondrium, and as the patient at this moment began to move, about fifteen feet of intestines protruded at the wound. These were very much glued together by adhesions, due evidently to old peritonitis, and the tumor had doubtless been caused by the adhesion of a large intestinal convolution beneath a mass of indurated omentum; for on destroying the adhesions I destroyed also the globular form, and left nothing but an omental tumor. The wound was therefore closed by several points of the twisted suture, covered by adhesive strips and supported by a compress and bandage. On being placed in bed her pulse was 120, and as the effects of the anæsthetic passed off, she became restless, to relieve which she took a half grain of sulphate of morphia. Three hours subsequently her pulse was 78, her urine was drawn off, and she slept. From this time her treatment, which was carefully noted by Drs. Smith and Braxton, consisted in free doses of anodyne, of which she generally took a grain and a half of sulphate of morphia per diem; in the constant use of the catheter to prevent distension of the bladder, and in the close observance of an equable temperature, light diet, etc. On the 6th day the sutures were removed, and nearly the entire wound found to be healed by the first intention. On the 8th day her bowels were evacuated by an injection, being the first time since the operation, and on the 21st day she was able to present herself to the class, having never had a serious symptom. She is now able to move about freely, but yet suffers from hemorrhoids. Owing to the condition of her recti muscles, she wears a broad belt over her abdomen to prevent any tendency to hernial protrusion, the umbilicus being yet as patulous as it was prior to the operation.

The failures which are due to errors of diagnosis are not rare. Lizars, of Edinburgh, in 1825, reported a case similar to the preceding one, the recti muscles being separated by the distension, the abdomen laid open, and

yet no tumor found, owing, as he remarks, "to the great obesity of the patient and the distended fulness of the intestines."* In a second case, the tumor could not be removed in consequence of the enlarged and adherent condition of the omentum. Dr. Bright† also mentions a case in which after the abdomen was opened no tumor was found. Dieffenbach‡ attempted the removal of an ovarian tumor, but after laying open the abdomen found a tumor connected to the vertebræ, which contained vessels that pulsated with great force, and on being punctured gave rise to profuse hemorrhage and symptoms of intestinal strangulation, though the patient recovered. Dr. Dohlfhoff§ opened the abdominal cavity for the removal of a tumor, but after searching for it found none. Mr. South|| states that Jeaffreson, in his tables, reports 23 cases out of 74 in which the diagnosis was not sufficiently accurate to enable the surgeon to foresee the impracticability of carrying out his intentions. In 14 of these 23 there were adhesions to such an extent as to preclude removal, in three no tumor was found, and in six the tumor proved to be other than ovarian. Dr. Washington L. Atlee¶ refers to 222 cases of ovariectomy, in six of which there was no tumor, or one in every 37 cases.

CASE XVIII. *Internal strangulated hernia relieved by opening the abdomen.*
By Thomas Wood, M. D., Prof. of Anatomy in the Ohio Medical College.
Western Lancet, 1853.

On Thursday, the 10th inst., I was called, in company with my friend Dr. J. P. Walker, to see Miller, a colored man, 55 years of age, who had been troubled with a scrotal hernia of the left side for a number of years. He had, three days previous to our visit, come to the city on a steamboat, on which he had been employed. He gave the following history of his case: He was in the habit of wearing a truss, but one week before we saw him, the bowel had passed by the truss into the scrotum, and on attempting to return it, he experienced considerable pain and difficulty in accomplishing his object. After a time, however, he succeeded in returning the hernial tumor into the abdomen. No motion of his bowels had occurred since the accident, although he had taken large doses of the most drastic purgatives, and had, repeatedly, had the rectum injected with cathartic enemata. He had suffered with severe pain in the umbilical region, and had vomited up all that he swallowed, both solid and fluid, during the past week.

We found him with a feeble pulse, shrunken and anxious countenance, with a cold perspiration on the surface; and at intervals of about half an hour he was vomiting stercoraceous matter, at the same time complaining of a "twisting" pain at the navel. By a minute and careful examination of the abdominal rings, both external and internal, no obstruction or hernial tumor could be found in them. The abdominal muscles were relaxed and soft, and the bowels not at all distended, as he had for several days emptied them by the mouth.

The finger could be readily passed from the bottom of the scrotum, through the external ring and inguinal canal, and into the internal ring of the left side, and no obstruction could be detected.

Although he had no pain or tenderness in the left iliac region, he said that he felt conscious that the difficulty was at that point; and on pressing the muscles down on the left ilio-pectineal line, a small movable tumor was

* Lizars' Observ. Extirpation of Diseased Ovaria, pp. 6 and 7, Ed., 1825.

† Bright on Abdominal Tumors. Guy's Hosp. Reports, vol. iii. p. 257, 1838.

‡ British and Foreign Med. Review, vol. xvi. p. 400, 1843.

§ British and Foreign Med. Review, vol. xvi. p. 401, from Rust's Magazine, 1838.

|| Chelius, Philadelphia edit., vol. iii. p. 213.

¶ Table of all the known Operations of Ovariectomy, p. 28. Phil., 1851.

faintly discoverable, which could be pushed inwards as far as the promontory of the sacrum, or carried outwards by the fingers above Poupart's ligament.

In consultation it was our opinion that this tumor was either an invagination, or, the portion of the bowel that had been returned, perhaps twisted on itself, and strangulated by bands of adhesive lymph. The man was evidently in a hopeless condition, unless he could be relieved by an operation, and it was therefore decided to make an exploratory operation through the abdominal muscles, and, if possible, find, and remove the difficulty. But at this time the operation was postponed, from the patient refusing to submit to it. He was left in the charge of Dr. Walker, who tried the effect of the tobacco injection, and other means, during the night, without any benefit. On Friday, about 12 o'clock, I was again called to see the patient, and found him much prostrated. His pulse was quite feeble, and his extremities cold and covered with a clammy sweat, while the stercoraceous vomiting was still more frequent. At this time he consented to have the operation performed. The incision was made, by commencing at the outer margin of the left rectus muscle, and running upwards and outwards, parallel with Poupart's ligament, and about two inches from it, extending the wound about four inches in that direction. When the peritoneal cavity was opened, and the omentum raised from the bottom of the wound, the difficulty was soon discovered.

A part of the sigmoid flexure of the colon was strangulated in the sac, which had been returned with the bowel through the internal ring. The sac contained about three inches of the bowel, which had become closely adherent to its inner surface, and strangulated by its mouth. After dividing the stricture, on a director with a bistoury, the adhesions were broken up with my finger, and the bowel and sac (that had been drawn out through the wound while dividing the stricture) were replaced, as nearly in their natural position as possible. The wound was then closed by stitches and adhesive strips, and a compress was placed over all, and retained by a bandage around the pelvis. That night our patient's bowels were moved twice.

His wound healed by direct union, and his recovery was not retarded by any unfavorable symptoms arising from the operation. On the fifth day after the operation he was sitting up to take his breakfast, feeling quite well.

CASE XIX. *Abdominal section (for what, we know not).* By G. Volney Dorsey, M. D., of Piqua, Ohio. Medical Counsellor, 1855.

We introduce this case not to commend, but to object to the course of treatment pursued in it. The writer, we think, was not justified in opening the abdomen by incisions of four and six inches in length. We publish the case entire that we may do him no injustice.

In February, 1855, was called to see I. S——, living near Palestine, Shelby County, Ohio, who had been for a long time suffering excessively severe pain in the left side, over the region of the spleen. The history which he gave me of his case is as follows: He is about forty years of age; was raised a farmer; had, some seventeen or eighteen years ago, several violent attacks of ague, which left him with enlarged spleen, or what is popularly termed ague cake. He suffered some pain in the side, but still continued to work his farm until about three years since, when the attacks became so severe as to force him to quit labor. Has applied to several physicians, who treated him for disease of the spleen, but without any permanent relief. He consulted one of the most learned gentlemen of the profession in Cincinnati, who did not consider his disease an affection of the spleen, but rather one of general irritation of the mucous membrane of the stomach and bowels, and ordered a

strictly vegetable diet, with mild cathartic medicines, and counter-irritation over the seat of the pain. He pursued this course for six months, but found no relief. At the time of my visit, he had attacks more or less frequently, but seldom with an interval of twenty-four hours, of most excruciating pain, apparently seated in a small spot, not larger in circumference than a dollar, situated in the left side, on the lower edge of the spleen. During the attack, which often lasted several hours, the abdominal muscles at this point seemed contracted, or drawn in, so as to present a considerable depression. So great was the violence of the attacks that the body was forcibly drawn down into a flexed position, the breast touching the knees, while his cries were most agonizing. Opiates in enormous quantities failed to produce any relief. His appetite was good and he stated that the quality of his food seemed to produce no effect on the attacks of pain. He had sent for me with the express desire that I would *open his side* and endeavor to remove the cause of his suffering. This I declined doing, as I told him it was very doubtful whether such an operation would relieve him, even should he survive the inflammation which would certainly succeed an opening into the cavity of the abdomen. I found that chloroform would relieve the paroxysms of pain, and I instructed his wife in the mode of applying it by inhalation, whenever he had an attack; a seton was introduced immediately over the painful spot; a teaspoonful of "Mouchou's Syrup" was given three times a day, and a pill of blue mass and extr. hyoseyam. at night.

He persevered for some months in this treatment. The seton produced very free discharge, and for a time during the summer, he seemed to improve and to be much freer from pain than formerly. The seton becoming troublesome and offensive, it was removed, and about the middle of August, his paroxysms of pain returned with increased violence; he had now almost constantly the most intense pain, with very little cessation day or night, and his health and strength were rapidly giving way. In this condition he again sent me word that he had determined to have an operation performed, by which his side would be opened and the seat of the pain revealed, and he urged me to come and perform the operation for him. I again stated to him plainly by letter (he lived twenty miles distant from me), the dangers of the operation, and the chances against its producing the desired relief, but he informed me in reply that he had duly considered all these things and was resolved to undergo the operation if I would consent to perform it.

Accordingly, on Sunday, 2d of September, assisted by Dr. Brownell, and also by Dr. Ledom, of Palestine, I proceeded to the operation. He was laid on a table and placed under the anæsthetic influence. I then made an incision six inches long, from the edge of the lower ribs, across the left hypochondriac region, and at the top of this incision another was made crosswise four inches in length, producing the shape of the letter T. The flaps being dissected freely downward, gave a very free opening into the abdomen. The appearance of the *abdominal muscles, fascia, and peritoneum* was perfectly natural; the peritoneum was, perhaps, a little thickened at the point where it was opened, and on cutting through it the *spleen* was found closely adherent to it for a space of several inches. The *spleen* itself was considerably enlarged, very hard, but *natural in its color and general appearance*. In position it seemed rather *thrust forwards*, either from its peritoneal adhesions, or from the *state of the stomach and intestines, which were much distended* with gas, though the bowels had previously been freely emptied. This state of the bowels gave considerable trouble during the operation, as nearly a hat full of the intestines protruded as soon as the peritoneum was divided freely enough to introduce the hand into the abdomen. These were, however,

carefully received and supported by my able assistants. I now proceeded to break up all the adhesions of the spleen, and endeavored to place this viscus as nearly as possible in what I conceived to be its natural position; the protruded intestines were carefully returned, the wound closed by stitches taken quite through the peritoneum, and freely and firmly supported by adhesive plaster, and again by a broad bandage about the abdomen. Only one artery required ligating during the operation. He remained under the influence of the chloroform for half an hour or more after the operation, which had itself consumed three-quarters of an hour, so that the whole period of insensibility was about one hour and a half. As the anæsthetic influence subsided, he was very much nauseated, as was very common with him after taking chloroform, and complained of intense pain and an intolerable feeling of tightness about the abdomen. The bandage was loosened, but afforded no relief. I then gave, two hours after the operation, half a grain of morphine, which was ordered to be repeated every hour until there was an abatement of the pain. On account of the urgency of professional business at home, I was obliged to leave in three or four hours after the operation, intrusting the patient to the care of Dr. Ledom, who kindly agreed to attend to dressing his wound, etc. I directed, before leaving, that in case of any sinking in the evening, he should have brandy and quinine freely administered, and this it became necessary to do, until reaction was well established. I also requested Dr. Ledom to combine sub-mur. hydrarg. with his morphine, until slight ptialism was produced, and to keep the bowels regulated with castor oil and turpentine.

I cannot do better than give some extracts from the report of this case, kindly furnished me by my friend Dr. Ledom, to whose careful management I am doubtless much indebted for the good result of the operation. The operation was performed early on Sunday morning. Dr. L. says: "At one o'clock in the afternoon, Mr. S—— seemed to be sinking; we administered the brandy and tonic according to your direction, and by six in the evening he had quite revived.

"Monday morning, six o'clock. Rested tolerably last night, by the use of morphia and sub-mur.; but little if any excitement in the circulation: six P. M., some sickness at the stomach, I think in consequence of the free use of morphia and sub-mur.; no pain or fever.

"Tuesday, six A. M. Quite comfortable, purged freely by the use of oil and turpentine given last night. Five P. M. Examined the wound; it looks well, no heat or swelling, some soreness, no appearance of suppuration.

"Wednesday, six A. M. Rested well last night, without morphia; a little more excitement in the circulation, some thirst, and rather more soreness. Six P. M. Doing finely, some appearance of suppuration; applied new strips; gave morph. and sub-mur.

"Thursday, six A. M. Rested well and is in fine spirits; pulse 76; says he could walk about the room, etc."

From this time the improvement was gradual and uninterrupted, and in six weeks the wound was almost entirely healed; he has had no return of pain, and looks forward confidently to enjoying again good health.

There are, to my mind, several points of interest connected with this case, to which I desire to call attention. The operation itself could not be considered very hazardous, less so, it seems to me than the Cæsarean section, from which women, as a general rule (this is quite an error), are found to recover; but the question arises, what was the cause of the intense pain and suffering of this man, and how was it relieved by the operation? Were the strong adhesions found to exist between the spleen and the peritoneum sufficient to produce this pain, and did the breaking up of these adhesions cause its cessation?

Was the pain, to any extent, neuralgie, and was the diseased nervous action changed or relieved by the inflammation consequent upon the operation? Could the indurated state of the spleen have produced the paroxysms of pain, and could this state have been relieved by the determination of blood to the surrounding parts in the state of inflammation necessary for the healing process? Had the spleen anything to do with the pain, or was it a spasmodic action of the abdominal muscles, which was cured by the division of their fibres? Here are questions of importance, and which I should be glad to answer in such a way as to satisfy my own mind. I have been more deeply impressed with this case, from the fact that only two years ago I was called to visit a very similar case, in an older patient, and in whom there was a more defined tumor on the spleen. There were the same intense paroxysms of pain, which all treatment failed to relieve. This man was also exceedingly anxious to have an operation performed for opening the side and removing the tumor which seemed to produce all his pain. I declined to perform the operation, and my patient was finally worn out with long-continued and intense suffering. Might I not have prolonged his life by an operation? I think so now; and I should, under similar circumstances, unhesitatingly proceed to open the abdomen and remove, if possible, the offending cause.

—What cause did he remove by the operation performed in the first case? And dare he repeat his voyage of discovery guided by the scalpel in the abdominal cavity to gratify the whims of another patient? Does he not know this to be a dangerous sea, even though we have chart and compass to direct us?

CASE XX. *Opening the abdomen for a cedar pencil passed into it through the female urethra.* By Prof. Erichsen, of the London University. American Journal of Medical Sciences, 1856.

In September, 1854, the patient, a young woman aged 28, being suddenly surprised while in the act of endeavoring to pass a pencil for the relief of some difficulty in micturition, allowed it to slip out of her hand. On sitting down shortly afterwards, she was seized with acute stabbing pains in the lower part of her abdomen, and although careful search was made by a medical man soon after the accident, no trace of it could be discovered. Frequent attacks of peritonitis followed the accident; and when she was seen by Mr. Erichsen, in May last, she was much emaciated and debilitated from that cause, as well as the constant severe pain in the abdomen, attended with vomiting and retching, which she suffered. There were no symptoms referable to the bladder, nor any pain in defecation; blood was occasionally passed per anum, but was attributed to piles, from which she had previously suffered. Upon examination the point of the pencil was felt distinctly projecting just beneath the integument of the abdominal wall on the right side, about midway between the umbilicus and Poupart's ligament; it was movable, could be pushed backwards, but returned to its original position when pressure was removed. The finger passed into the vagina or rectum detected the pencil through the walls of those organs, lying across the body in a direction from before backwards, the blunt end of it being lodged in the hollow of the sacrum; it was beyond the reach of the finger, but pressure upon that part of it through the rectum caused the point to become more distinct in the abdominal wall in front. Under these circumstances, an incision was made by Mr. Erichsen through the anterior abdominal wall, until the leaden point of the pencil was discovered forced through the fascia transversalis, the pencil being at the same time caused to project upwards and forwards by an assistant pressing deeply in the rectum. The wound being slightly enlarged, the pencil was extracted; it was

five inches and a half long, and the point was still perfect; it had separated into its two halves. It was marked by three broad bands, indicating that it had passed through two coils of intestine; but no flatus or feces, however, followed its extraction. Severe peritonitis followed, and the patient died on the fourth day after the operation. *Post-mortem* examination proved that the pencil had been forced through the upper and posterior vaginal cul-de-sac, close by the side of the uterus, and then through two coils of the ileum, a mass of which, about the size of the fist, was found glued together by old and recent lymph, lying about midway between the umbilicus and pubes, to the right of the mesial line.

CHAPTER VII.

THE PELVIS.

SECTION I.

FOREIGN BODIES IN THE RECTUM.

CASE I. *A tin tumbler pushed by the patient into the rectum; then passed into the colon; failure to remove it, and death of the patient.* Boston Med. and Surg. Journal, 1855.

The patient introduced the tumbler on the 4th of April, 1834, causing its entrance into the bowel by sitting upon it. The tumbler being drawn upwards with the returning intestine, attempts were made by the patient to extract it, with his fingers, and by means of "shoemaker's forceps." "With these he had considerably broken and flattened the edge of the base, or rim, of the tumbler, and forced it beyond the rectum, into the colon." It was found in this situation by the physician who was summoned, Dr. George Moodie, of North Andover, Mass. Dr. M. introduced his "hand and forearm into the rectum, seized" the tumbler and "made a powerful," but unsuccessful, "effort to extract it." The blunt hook was next tried, without extracting the tumbler, although it was brought down so that "it could be seen." "Owing to its flattened state, it hitched in the plicæ of the intestine." Several physicians and surgeons were called in consultation; among others, Dr. Joseph Kittredge, of Andover, and Dr. Whiting, of Haverhill. No efforts at extraction by the hook or the fingers were of any avail; although the tumbler was brought into view and seized, powerful efforts being again made to disengage it from its situation. One of the practitioners again introduced his hand, but could not bring the tumbler away. The patient asked to have his abdomen opened, and the foreign body thus removed. "He was told that this would produce certain death." A proposition to divide the levatores ani was negatived by Dr. Kittredge, who feared fatal hemorrhage. "The patient lived about three days after this. His tongue sloughed, and there was gangrene of the large intestine. The tumbler was extracted after death; it measured $3\frac{1}{2}$ inches in length, $3\frac{1}{2}$ inches in width in the direction of the flattened part, and 2 inches across its base; it would hold nearly three gills."

CASE II. *An immense number of plum-stones (about two hundred and eighty) removed from the rectum.* By R. Hazlehurst, M. D., of Brunswick, Georgia. American Journal Med. Sciences, 1852.

A strong, able-bodied negro, aged about 25, working on a canal near this

place, took it into his head to eat very freely of plums, stones and all, as he says (and probably truly), without eating anything else during the day, and at two different times. Not apprehending much of consequence, a dose of castor oil was directed, and this not having proved effectual in removing the symptoms, I had recourse to artificial means, the introduction of the forefinger with the intention of scooping them down with it. In this I might have succeeded, if I had not been prevented by the soreness of the rectum, and the inability of the patient to bear the least pressure, on the plum-stones now come down. By the continued straining and ineffectual attempts at defecation, they were completely impacted in the rectum, in the same manner that buckshot, well chambered in a smooth-bore gun, cannot be removed by inverting or shaking the barrel. I got out four or five by several enemata of cold water, and six or seven with the finger. But the latter proceeding was so painful to the patient that he ran off into the woods. I left directions for him to take a dose of oil the next day, which brought away some more, but purged him excessively; and on the third day when I saw him, he was much reduced, and in a state of desperation and great suffering. I examined the rectum, and found it *in statu quo*, completely plugged up with the plum-stones, only allowing liquid feces to pass through their interstices. After having tried an injection of warm water and oil without effect, I introduced my finger with the intention of removing them one by one; but as soon as I touched one with the finger he jerked away, said he was going to put on a clean shirt, and ran off again. An attempt was made to bring him back; but he appeared maddened by his sufferings, and it was found impossible to get hold of him. The next day, the fourth from his first complaining, it was feared, from his non-appearance, that he had been drowned by the tide flowing up and covering the salt marsh where he was last seen, and on which it was probable that he had laid himself down. Search was made for him several hours, and he was at last found lying on the ground, so much reduced from hunger and suffering that he was unable to move, and had to be carried home. There was now no time to lose. I put a previous threat into execution, had him tied, introduced my finger, and sliding a pair of forceps, rounded and grooved at the extremities, alongside, was steadily employed, for the space of three hours, in removing the plum-stones one by one, until no less than one hundred and thirty were counted, besides some forty that he passed afterwards, and more before, which last were not counted, but must have made them altogether amount to two hundred and eighty plum-stones. I do not know what measure of plums these would make, but I suppose about a peck. The extraction of each stone occasioned exquisite pain, and the patient requested rest after every two or three were removed. Most of them were covered with blood, and would doubtless soon have brought on ulceration in the gut. Dysenteric symptoms, as might be supposed, have ensued, which ceased with the removal of the cause and appropriate treatment.

P. S. The patient is almost well, and by measurement it is found that he must have eaten almost ten quarts of plums, say a peck, at a moderate calculation.

CASE III. *A cow's horn in the rectum.* By Horace Nelson, M. D., Plattsburgh, New York. Northern American Lancet, 1852.

In the morning of one of the many days, with which we have been lately visited, when the thermometer ran down in the neighborhood of a baker's dozen below 0, an individual retired to the leeward of a barn for the purpose of evacuating the bowels. After a hasty survey of the premises, he lighted upon a cow's head (by the way, it was that of a dead one), and while in deep

reflection upon the physiological operation he was then engaged in, accidentally slipped his footing and fell upon the horn, which was thrust up the rectum, broke, and became securely lodged beyond the sphincter. The case being rather a novel one, and withal of a delicate nature, it was deemed prudent not to commit it to the care of old women, but to call in our friend, Dr. Fulton, of Beekmantown. An examination soon satisfied the Doctor that the intruder could only be ejected *vi et armis*, and was accordingly proceeding to put his intention into operation, when the patient strongly objected, relying upon castor oil. But our friend doubting the efficiency of the oil in this species of constipation, and having more faith in a strong arm and good forceps, finally prevailed upon the patient to submit to the operation. With very great difficulty the horn was extracted, and measured a trifle less than five inches in length.

CASES IV., V., VI. *A tumbler, a beer-glass, and a preserving pot, in the rectum.* Lancet, 1844.

M. Maisonneuve related to the "Société Médico-Pratique," the case of a man, a patient of M. Cloquet's, who had introduced a *tumbler* into his rectum. In order to extract it, M. Cloquet dilated the anus with six fingers, which being insufficient to dilate it to the required extent, MM. Maisonneuve and Huguier, who were present, each added four fingers. The *fourteen fingers* enlarged the anal orifice to such a degree, as to allow the tumbler to be seen. The bottom of the tumbler was directed upwards, and the open part downwards. The man was then told to bear down, as if for defecation, and the glass was expelled. This case is a most remarkable example of the extent to which the anus may be dilated, without injury to the sphincters.

A few weeks previously, M. Cloquet had had under his care another individual, who had introduced a Flemish *beer-glass* (shaped like our champagne glasses), into his rectum. The glass was seized with forceps, but broke into many pieces. In order to get the lower part out, it was found necessary to turn it, as the open broken part was turned downwards. The man died in the course of a few days.

M. Thierry narrated a case which occurred to Dupuytren. A man had introduced a square *preserve-pot* into the rectum, the open part being superior. Dupuytren seized hold of the rim by means of a blunt-hook covered with chamois leather, and thus extracted it.

CASE VII. *A half-pint flask, and subsequently, a large beet, in the rectum of the same patient.* By T. M. Harris, M. D., of Harrisville, Virginia. Western Journal of Med. and Surgery, 1848.

On the 19th of May, 1846, I was summoned to attend a young Dutchman in this neighborhood, and received the following history of his case:—

He had been suffering from an attack of piles, and having been informed that the disease could be cured by introducing the neck of a well greased bottle containing some hot spirits of turpentine, he undertook to prove the remedy. But, unfortunately, using nothing larger than a *half-pint flask*, and having, as I suppose, a more than ordinarily capacious outlet to the alimentary canal, the flask slipped in, and the sphincter closed upon it.

Here was a dilemma—a man with a half-pint flask in his rectum sought relief; and what was to be done? Notwithstanding the case bordered a little upon the ludicrous, it became, to me, a subject of most serious and anxious concern. At length, however, I resolved upon a plan, and accordingly went to a blacksmith, and had a pair of forceps made, somewhat after the fashion of the obstetrical instrument, with blades about seven inches long, by about three-

fourths of an inch wide, and handles eight or ten inches long. These being prepared, and the blades well greased, I introduced a blade at a time so as to inclose the bottle, locked the instrument, and commenced my efforts at extraction. But the blunt end, or bottom of the bottle, presenting, I soon satisfied myself that it would be no easy task to effect its removal. At length, by the force of my efforts, I smashed the flask in fragments. Having no further use for my forceps, I laid them aside and set myself carefully to work, removing it, a piece at a time, with my fingers. This I completely accomplished, after laboring faithfully for about three hours. I then washed the rectum by throwing up large quantities of warm water; ordered a dose of sulph. magnesia, and in three days had the satisfaction of seeing my patient about his employment.

On the 29th of January, 1847, I was called to see the same patient, and informed that a similar mishap had befallen him, the body now introduced being a *beet*. I made an examination, and could trace with the finger the large end of a beet of such dimensions as to cause the utmost astonishment; and to increase the difficulties of the case, it had been retained more than 48 hours, the patient having entertained the intention of dying like a hero, without disclosing his condition; from which determination, however, the intensity of his sufferings forced him to depart.

There was now a good deal of tumefaction and tenderness about the anus; and very great tenderness of the abdomen generally; vomiting had set in. I again introduced my forceps, but with great difficulty, on account of the tumefaction and soreness of the parts, and soon found that I could not make the necessary extractive efforts without having my forceps slip off; the patient was also exceedingly irritable, and could not endure the necessary force. I now took my forceps to the smith, had the width of the blades reduced one-fourth, and the points turned in so as to form a hook, obtained two or three assistants, and returned to the novel operation.

Having premised a free bleeding and the hot bath, so as to obtain a good degree of relaxation, I administered 35 drops of the tinct. of opium, and having placed my patient on his knees and strapped him down tightly over some chairs, I again introduced my forceps, and quickly succeeded in bringing away a beet nearly seven inches in length, and in its largest diameter about three and a half inches.

It had evidently been selected by my patient on account of its size, in order that it might be impossible for it to be taken in; and feeling thus secure, he had introduced the small end, and pressed down upon it with his whole weight.

I now administered injections, and laxative doses, and restricted my patient to a low diet for two or three days, when he again resumed his employment.

CASE VIII. *Extraction of a glass goblet from the rectum.* By W. S. W. Ruschenberger, M. D., U. S. Navy. American Journ. Med. Sciences, 1849.

While recently on a visit to Canton, I derived the history of the following case from the notes and verbal explanations of the Rev. Peter Parker, M. D., Chief of the "Ophthalmic Hospital," etc., under whose notice it fell. The case seems to me so unusual, that I avail myself of Dr. Parker's consent, and submit it for publication; it affords us a glance at the debauchery practised by a portion of the Chinese population about Canton.

On the records of the hospital, the case numbers 23,930. *Glass goblet extracted from the rectum.*—In the evening of the 1st of March, 1848, a young man, very respectable in appearance, solicited Dr. Parker's aid for his father,

whom he had brought to the hospital. With many expressions, indicative of his sense of shame and mortification, he related that Loo, his father, then sixty years of age, had spent the preceding night in one of the "flower boats," or floating brothels on the river, with a prostitute. Under the insane excitement or intoxication produced by the combined influence of drinking spirituous liquors, and smoking opium, the lecherous sufferer, in mischievous frolic, forced a glass goblet into the vagina of the companion of his sports. In the course of the night, Loo fell into a state of unconsciousness, when the woman sought her revenge. She carefully insinuated the base of the goblet within his anus, and then placing the end of her opium-pipe—a cylinder about an inch in diameter, and a foot and a half in length—at the bottom of the goblet on the inside, suddenly pushed it into the rectum, entirely above the sphincter. Twenty-four hours had elapsed since its introduction. An angle of about a half inch of the rolled lip of the glass had been broken out by efforts made by friends to remove it.

Such was the report of the case when brought to the hospital for relief.

On examination, the glass was found firmly fixed in its position; it was very difficult to pass the extremity of the finger beyond its lip, betwixt its outside and the rectum. In Dr. Parker's opinion, it was impossible to extract it entire; and, therefore, though anticipating difficulty and danger in the operation, he determined to break it down. By means of forceps, such as used by obstetricians in breaking up the foetal cranium, commencing on the side nearest the pubes, he broke up the goblet and extracted it piece by piece, carefully guarding the parts by folds of cotton cloth as he proceeded, and removing the small sharp fragments which fell, with a teaspoon. After the bowl, or bell portion was removed, the most difficult part of the operation remained to be performed, for the hemorrhage was free, and the base of the goblet, with the sharp points of the sessile stem, resulting from the fracture, was high up in the rectum, and firmly embraced in a transverse position. Assisted by the bearing-down of the patient, the edge of the base was reached by the point of a finger, and with difficulty turned edgewise, guarding against fractured points by pledgets; then, by pressing the smooth side, or bottom of the glass against the rectum, it was at last extracted. Remaining fragments were sought for, and the intestine thoroughly washed out. To arrest the hemorrhage, which was considerable, strong solutions of sulphate of copper, and of alum, were injected, and temporarily confined in the rectum, by pressing a sponge against the anus. For a time the bleeding ceased; but during the night, several ounces of coagulated blood were evacuated; afterwards, there was no more hemorrhage.

The operation occupied an hour and a half. An opiate was administered, and the patient placed in bed. The general treatment consisted in rest, laxatives, and light diet; the rectum was occasionally injected with tepid water, and solutions of nitrate of silver.

On the fourteenth day the case was discharged, cured.

CASE IX. *A large piece of wood in the rectum.* *Lancet, 1835.*

A person named Muggeridge, aged fifty years, of spare habit, in appearance healthy, waited upon me to state that he had been advised by a friend to push a piece of wood up the rectum, with a view, by the process of rubbing, to disperse a stone in his bladder. His friend, he said also, had not only advised this course, but was kind enough to procure the trunk of wood for him "free of expense." He (Muggeridge) accordingly commenced the process, but unfortunately forced the instrument so far up the rectum, that all his endeavors to withdraw it had proved unavailing. After three days of inconvenience, he

had now come to me for assistance. At first I thought that his tale had no foundation in truth, but after an examination I found that I was wrong, though with my finger I could not discover the object of search. On placing my hand over the pubes, towards the right side, where he said he experienced most pain, I felt some hard substance, and then introduced a metal bougie, which struck against a foreign substance. With some difficulty I passed the four fingers of my left hand up the rectum, and found the presenting end of the alleged piece of wood, its anterior end resting over the pubes. By pressing and keeping the point of my finger on its posterior part, I then introduced the blade of the straight midwifery forceps in the place of my finger, and next applied the other blade, trying to bring down the object of search, and, after several times losing the grasp, I succeeded in accomplishing its extraction. I was indeed astonished at the result. The piece of wood proved to be a portion of a stout branch of a tree, rough and ugly enough. It was seven inches long, and seven inches in circumference where two projecting knobs, each as large as half a fowl's egg, had formed the commencing division of two new branches. When the forceps were grasping it, the dilatation extended to ten inches in circumference as they passed out of the rectum; I forward it to your office in testimony of the correctness of my description.

No untoward symptom has supervened, though great force was necessary in withdrawing the object, and a certain degree of laceration of mucous follicles and minor bloodvessels was unavoidable.

CASE X. *Fish-bones impacted in the rectum, causing death.* Lancet, 1849.

The patient, who was an old and intemperate man, had been accustomed, since February last, to lose, per anum, occasionally, a rather large quantity of blood, without his health being apparently impaired. The source of the hemorrhage had always been attributed to internal piles. A few days before his death the hemorrhage became more frequent, the blood being of a florid color; at the same time a piece of fish-bone was observed projecting from the anus, which together with a few similar portions from above the sphincter, were removed. The temporary cessation of bleeding was followed, the next day, by renewal of hemorrhage, when the finger, and subsequently the forceps, were introduced into the rectum, and a large number of thin and pointed bones dislodged. The patient, however, soon became blanched by another loss of blood, and died.

Post-mortem.—The stomach and small intestines healthy; the large gut, in its whole length, much distended by feces and flatus, and here and there fish-bones were found. The lower half of the rectum was of more than thrice its natural thickness, and the mucous membrane, in part, sloughy, and extensively and deeply ulcerated at the back part, whilst two or three jagged perforations were discovered in it. Several dozens of fish-bones were entangled in the disease, some of which, by opening into the hemorrhoidal vessels, had given rise to the bleeding and consequently death. The bones were of a dark brown hue, having, most probably, derived that color from the bile; they, together with the rectum, were placed before the Society.

CASE XI. *A bottle in the rectum.* Busche on the Rectum.

Nolet, surgeon to the King of France and Marine Hospital at Brest, relates the following curious case: A monk wishing to get rid of a violent colic, introduced into the rectum a bottle of Hungary water (these bottles are generally long), through the cork of which he had made a small opening, to permit the fluid to flow into the intestine. In his anxiety to perform the operation

well, he pushed the bottle so far that it completely entered into the gut. He could neither go to stool nor receive a lavement. A *sage femme* failed to insert her hand; the forceps and speculum were tried in vain; however, a boy, from eight to nine years of age, succeeded in introducing his hand and removed the bottle.

CASE XII. *A large plug of wood passed into the rectum. Extracted through an opening made into the colon.* By M. Riali, of Italy. Ranking's Abstract, 1852.

In December, 1848, a peasant was admitted into the hospital of Orvieto, in the last degree of feebleness and prostration. Under the idea that he would save the trouble and expense of eating, he had plugged up his rectum with a piece of wood. This was nine days previously. Many attempts had been made in the interval to relieve him from his awkward predicament, but without success. After his admission, M. Riali reiterated these attempts, but their only effect was to force the foreign body further from the outlet, and to increase the impaction. Already this body had passed beyond the reach of the finger. Under the circumstances it was determined to expose the descending colon by cutting through the abdominal parietes. Having done this, attempts were made to force the piece of wood from the termination of the colon, at which it was distinctly felt, into the rectum, and so downwards, and again without success. An incision was therefore made into the bowel, and the foreign body—the dimensions of which were about $6\frac{1}{2}$ inches by 1, and the form a bluntish cone—was extracted through the opening.

The edges of the wound in the intestine and parietes were united by suture, and cold applications placed over the usual dressings. During the first few days there was much flatulent distension of the abdomen, with considerable sickness and vomiting, for which symptoms, three bleedings, three applications of leeches, and some doses of croton oil were thought necessary. The bowels acted on the fifth day. The wound had healed on the 14th, when the patient was well, though for the sake of prudence he was kept two months in the hospital. And now, two years and nine months afterwards, he continues well, eating and drinking all before him, and no longer disposed to distress himself on the ground of his appetite.

CASES of foreign bodies in the rectum; a forked stick; a pig's tail; a teacup; a glass phial; a flask; an earthen pot; a chimney sweeper's scraper; pieces of wood; a shoemaker's pincers. *Lancet*, 1836, vol. xxx.

A man, twenty-nine years of age, had suffered from his childhood under prolapsus recti, and was in the habit of restoring the intestine without any aid. On one occasion, when the rectum prolapsed, he cut a branch of willow, which divided, a few inches from the end, into two lateral prongs, and holding the pronged portion between his fingers, forced up the other end into the rectum, and thus restored the gut; however, on continuing the pressure too long, he had the misfortune to introduce the whole instrument within the rectum, which he was unable to withdraw, on account of the elasticity of its branches. After the lapse of eight days, the patient was seized with acute pain in the breast, and compelled to seek medical assistance; he ascribed the pain to the foreign body in the rectum, whose length he described as being somewhat more than four inches. The excretion of urine and fecal matter was perfectly regular, and nothing could be discovered by an examination made per rectum; some doubts were entertained of the truth of his story; however, laxative medicines were ordered, and another physician sought to dis-

cover the foreign body in the lower intestine, but without success. The patient now complained of frequent tenesmus, dysuria, and severe pain in the vesical and inguinal regions. Warm fomentations, lavements, etc., were employed without any advantage, and the patient was soon compelled to keep his bed. The author now saw the patient for the second time, about two months after his first visit, and on examination, found, to his great surprise, one prong of the instrument projecting through the skin covering the gluteus maximus, and a little to the right side a fluctuation, which was opened and allowed the second prong to be seized; the operator was now fortunate enough to separate them at their angle of junction with the stem, and to withdraw each through the same opening. The instrument was much larger than the patient had described it to be. Each prong was fully nine inches in length, and the handle of the fork was two inches long, with a diameter of three-quarters of an inch. The man felt much relieved after the operation, but hectic fever set in, and he sank in five weeks; the examination of the body was not permitted by the friends.

A party of debauchees, wishing to play a trick on a woman of pleasure, cut short the bristles of a pig's tail, which they forcibly introduced into her rectum, the thick end upwards. Severe pain was the immediate consequence; the mucous membrane was irritated or perforated by the bristle stumps, and tenesmus set in; a portion three inches in length projected beyond the anus. The patient's state was very distressing. M. Morchettis was called upon on the sixth day. He conceived the idea of preparing a piece of cane so as to introduce one end of it into the rectum and thus isolate the foreign body from the wall of the intestine. He then attached a firm cord to the end of the pig's tail, which was passed into the tube; the latter was gently pushed up into the rectum, and when its extremity had reached beyond the extremity of the foreign body, both were extracted together without difficulty or pain. The patient felt immediate relief, and all unpleasant symptoms, the vomiting and fever quickly disappeared.

Buzzani relates that in the year 1777 he extracted, at Turin, with a crooked fish-bone, from a man's rectum, a tea-cup, which the latter had introduced into the rectum for the purpose of dilating the canal.

Nollet relates the following case: A gentleman had introduced into his rectum a long glass phial: it was impossible to extract it, and obstinate constipation was the result. The neck of the flask constantly slipped away from every instrument that was placed around it. At length a child of eight or ten years old was directed to introduce his hand, properly oiled, into the gut and seize the foreign body. This manœuvre succeeded.

In 1813 Tuffel extracted a flask of crystal from the rectum, but he was obliged to break it up beforehand.

Custance, in 1829, extracted an earthen pot. A pestle was introduced and struck with an iron bar, while the fragments were removed with the forceps.

In one case Desault was forced to break up a chimney-sweeper's scraper with a lithotomy forceps and then extract it.

A patient under the care of Professor Leber, at Vienna, attempted to procure an alvine evacuation by introducing into his rectum a piece of wood one foot long, and nearly an inch thick. On examination the foreign body could barely be reached by the finger; the lower end was perforated with a gimlet, and the body was extracted after a great deal of difficulty.

In another case, which happened to Professor Von Reinlein, the point of a bit of wood could be felt under the false ribs, and the respiration was extremely difficult and painful. The portion of wood was extracted with a forceps. Several inflammatory symptoms followed, but they were removed by proper treatment.

A workman, while in the act of satisfying nature, fell down, and a piece of wood four inches and a half long, entered into his rectum. The foreign body remained in that situation for a year; gave rise to fistulous abscess, and was finally abstracted by Dahlecamp in 1829.

Lastly, Kern and Walther have each extracted a shoemaker's pincers from the rectum.

SECTION II.

AFFECTIONS OF THE RECTUM.

CASE I. *Piercing the rectum, of a young lady, with the pipe of a syringe; recovery.* Philadelphia Journal of Med. and Phys. Sciences, 1827, vol. xiv.

A nurse, in applying a glyster, introduced the point of the syringe so roughly and unskillfully as to push it through the back part of the rectum. By the exertion of considerable force, she emptied the contents of the syringe into the pelvis. The patient, a young lady, suffered considerable pain afterwards. On the sixth day a membranous mass, which was ascertained to be a portion of the rectum, passed away with the feces. Upon examination, an opening was found in the back part of the gut, about the size of a dollar, and about two inches from the anus. If a sufficient quantity of water was injected, the rectum was distended, and also the interval between the posterior surface of the gut and the sacrum, in consequence of the fluid escaping through the aperture, the edge of which could be felt loosely floating. The greatest distress and danger arose from the escape of feces into the pelvis. Injections were used for the purpose of washing out any portion which passed through the opening: a part of the feces still passing in the natural manner. Mild injections were frequently used, in a small quantity, that the rectum might not be kept separated from the sacrum. Light broths, yolks of eggs, etc., were allowed as diet. Prof. Graefe was consulted under these circumstances, and he adopted the following plan: He introduced a portion of the intestine of an animal into the rectum, and, having filled it with water, he tied the end projecting from the anus: by this means the rectum was kept in contact with the sacrum. Air was afterwards substituted for water, as the weight of the latter was found inconvenient. The plug was removed every twenty-four hours, and the feces, which its presence prevented from descending, evacuated; and the intestine, well oiled, again introduced, and filled with air. A gradual improvement followed, and in a few weeks the wound was entirely closed, without any contraction of the rectum, and the feces were passed without difficulty.

CASE II. *Lacerated wound of the rectum and bladder produced by the leg of a chair; death.* By Prescott Hewett, Esq. Lancet, 1847.

The patient, a man, aged forty-three, was admitted into St. George's Hospital, under Mr. Keate, in a state of collapse, and complaining of severe pain about the vesical region, and over the lower part of the abdomen. He stated, that a short time previously, he had slipped off a table upon which he was standing, and that in his fall, he had knocked over a chair, one of the legs of which having struck him on the side of the anus, had glanced off, and passed up the rectum. On examining the anal region, nothing was observed, with the exception of a slight laceration at the left margin of the anus, which did not penetrate more than a few lines in depth. A catheter was passed into the bladder, and a quantity of bloody urine drawn off. The pain soon spread over the whole of the abdomen, the collapse continued, and the patient sank, with symptoms of low peritonitis, in about twenty-one hours after his admission

into the hospital. At the *post-mortem* examination no appearance of injury existed about the perineum; but there was some ecchymosis in the neighborhood of the slight wound at the margin of the anus. At about two inches and a half from this opening there was a large lacerated wound in the front part of the rectum, through which two fingers were easily passed into the bladder, at its fundus, and on 'laying open this organ, another extensive laceration was found at the right side of its apex, leading into the cavity of the peritoneum. The leg of the chair having slipped up the rectum, had thus transfixed this organ, and the bladder from its fundus to its apex. The peritoncum contained a large quantity of bloody fluid, mixed with recently-effused lymph.

CASE III. *Perforation of the rectum with a bougie; death.* By Robert Parks, Surgeon, England. *Lancet*, 1834, vol. xxv.

A clergyman of this town, a highly respected man, and on whom a wife and eight children depended for support, became suddenly afflicted with inflammation and mortification of the bowels, occasioned by the improper and incautious use of the rectum bougie. He had been for several years troubled with irregularity of the bowels, and had used a great variety of aperient medicines to preserve himself in any degree of comfort; he had also used the lavement syringe with great benefit. He felt persuaded, however, from his own feelings (and contrary to the opinions and reasonings of many medical friends whom he consulted), that a narrowness of the gut was gradually coming on, and unless some means were adopted to dilate the passage, and prevent the increasing difficulty in its function, he should ere long be incapable of passing his feces. As he continually labored under this impression, he consulted a surgeon, who recommended the use of bougies, and an assortment of various sizes was procured. They were well formed, and adapted for the purpose intended, and were regularly used, with apparent ease and satisfaction to the sufferer, up to the day of the fatal attack of illness. That morning he used the bougie twice, but not being sufficiently relieved by the first attempt, he passed the instrument a second time, and remarked that he did so much easier than at any former introduction. On reaching his home at about one o'clock P. M., I was sent for, and on arriving, I found him complaining of acute pain in the pubic region, accompanied with difficulty in passing urine. A general chill pervaded the whole frame. I directed him to go to bed and apply heated substances to the surface, to drink warm diluents, and to take some medicine which I sent him. In less than half an hour I was again required to see him; the pain had greatly increased, and had ascended to the right side, accompanied with difficult respiration; he still continued cold; artificial heat was applied with great diligence, and after some time reaction was produced. He was bled copiously, producing syncope, but without any abatement of suffering, and I gave him strong cathartics, which the stomach retained. No evacuation *per anum* took place, but he passed urine freely during the night; twenty-four leeches were then applied to the side, and enemata were administered, but all without relief. He rapidly became worse, his pulse sank, respiration became laborious, the stomach was greatly oppressed, and he died at about 4 P. M., twenty-six hours from the commencement of the attack.

Sectio cadaveris. On opening the abdomen, much very offensive air escaped, raising the small intestines. Very extensive inflammation pervaded the whole canal; the lower portion evinced the greatest degree of inflammation, with extensive mortification. A dark-colored pus-like fluid was contained in the cavity of the pelvis, or, rather, a fluid presenting the appearance of light-

colored feculent matter. The same kind of matter adhered to the lower surface of the intestines. Lymph had exuded, and formed adhesions among many of the folds of the small intestines. A ligature being applied above the sigmoid flexure, the rectum was removed, and in the middle portion was found an opening, which penetrated the gut and adjoining portion of peritoneum. This must have been caused by the too frequent use of the bougie. Through the opening a portion of liquid feces had escaped, occasioning inflammation, mortification, and death.

CASE IV. *Protrusion and sloughing of the rectum in an infant; recovery.* By Josiah C. Nott, M. D., of Mobile, Alabama. New Orleans News and Hospital Gazette, 1854.

In April last, I was requested by Mr. T., a well known merchant of Mobile, to see his child, a daughter, then about fourteen months old. She had been fretful, and her mother discovered that a small quantity of blood had passed both from the rectum and vagina. The child, a few days before, had swallowed and thrown up some fragments of brown straw, and it was surmised that a piece might have passed down into the rectum, and protruded through into the vagina; but no straw was seen in these parts. I directed a dose of oil, flaxseed tea injections into rectum and vagina, and quiet. In a few days all seemed well again, and nothing occurred during the summer to attract attention.

About the 20th September, the child became uneasy, and passed a little blood again, and on the 22d, I was sent for in haste to see it, but being absent from my office, Dr. Inerarity was requested to call, and found about six inches of intestine protruding from the anus, with the lower end free and unattached. Seeing no immediate indication, he proposed not to interfere before my arrival, as I was the family physician. I saw the child with him a few hours after, and found, as above stated, the bowel protruding. On examination, it seemed that there had been an abscess and ulceration around the sphincter ani, that the perineum had given way, thus throwing the rectum and vagina together, and that the large intestine, cut loose from its lower attachments, had passed entirely out to the extent of six inches. The child was in pain, cried violently, and made all possible resistance during the examination, and, in fact, prevented us from making as full and fair an examination as we wished.

The most important question, however, was, what could be done to remedy the difficulty? It was clear that no good could be expected from stuffing the intestine back into the pelvis; it would certainly be expelled immediately, and our examination even was terminated as quick as possible, as the straining effort of the child, while screaming, had a tendency to force down more bowel.

The case was therefore left to nature; the stools passed through the protruded portion every day, and on the fourth day, the bowel being completely sphacelated, I clipped it off close to the anus with a pair of scissors. Since that time, the general health of the child has been pretty good. It had a teething diarrhoea previous to the accident, and has had from two to half a dozen operations during the twenty-four hours, ever since. The operations are soft, but sometimes pretty firm and well digested.

I visited the child this morning (3d of November), six weeks after the accident, and on examination found the parts apparently healed. The lacerated perineum remains, and the loose bowels, but otherwise the child seems well. Owing to the determined opposition of the child, it is impossible to make a perfectly satisfactory examination of the parts, but there is good reason to

believe that the bowel has formed adhesions near the anus, and that there has been created what an Irishman would call a *natural artificial anus*!

I have not taken the trouble to look over authorities, but remember no similar case on record. On my visit to-day, I found that a homœopathic doctor has been called to the case, and I retire. He has attacked the baby fore and aft with infinitesimals, and I sincerely hope that he may perform a fundamental miracle.

CASE V. Rupture of the rectum, with protrusion of the greater portion of the intestines per anum; death. By Richard D. Arnold, M. D., Prof. of Practice in the Savannah Medical College. Southern Med. and Surg. Journal, 1839.

The following strange case occurred in the practice of Dr. J. C. Habersham. As I wished to bring it to the notice of the society, I requested of Dr. H. a history of the case so far as it had been under his observation. The following letter from Dr. H. to myself, will afford the necessary information:—

Feb. 2, 1838.

DEAR SIR: I was called to visit the woman Flora, owned by Mr. Blake, on the 19th of November last. She had been sent from the country under the impression that she was crazy. She complained of pain about the occipital region, had furred tongue, and on pressing the epigastrium, she said she experienced a dull sensation of pain. I applied a blister to the neck, and gave blue mass and c. oil. The next visit she was missing, and was absent from the mill two days, and when she returned, said she had been to see her friends. She continued to convalesce until about the 16th of December last, when I was requested to bleed her, as she said she was again troubled with pain about the epigastrium. She got better, and was assisting in the cooking department at the mill, and continued there until the 24th of January last, when I was requested to see her early on that day. A woman who professed to be a midwife, had been with her all night, and told me she was in labor. As I had not suspected pregnancy during my attendance, and as my attention had never been directed to that condition by her, I doubted her statement, and uncovering the patient, I found, to my great astonishment, a vast quantity of intestine tied and suspended on the floor in a handkerchief. The woman said that Flora had complained of being in labor when she was called to her, and they were both under that impression when I commenced the examination. As you saw her with me about a half-hour after my first visit, I leave the subsequent circumstances to your own recollection.

Yours, very truly,

J. C. HABERSHAM.

TO DR. ARNOLD.

By request of Dr. H. I accompanied him and Dr. Richardsone to visit her while still alive. We found her lying on the floor, cold and pulseless; and protruding from the anus and lying on the floor, was an immense portion of the intestines, which upon inspection we pronounced to be small intestine and a portion of the colon. The mesentery was attached to that portion of the small intestine protruded, in an almost entire state, except where it had been torn from its attachment to the posterior parietes of the abdomen. The intestines protruded were cold, and vitality had evidently fled from them. It was found that there was no rupture of the vaginal canal, and that the protrusion was posterior to it. The opening by which they protruded seemed very large. An unsuccessful attempt was then made to return the bowels, after which nothing further was attempted. She died in about half an hour afterwards.

The *dissection* was conducted by Dr. J. Blakely Tufts and myself, four or five hours after death, in presence of Drs. Habersham, Earle, and Richardsone, and Mr. Guernsey, student of medicine. The body was that of a robust female, the muscular system very well developed. The abdominal muscles presented no peculiarity to attract attention. On cutting through them, the stomach was perceived very much distended with wind. The greater portion of the colon also appeared in the abdomen. The peritoneum appeared highly injected.

In order to ascertain what portion of intestine had passed out, an examination was carefully commenced from the duodenum downwards, the mesenteric attachments being carefully cut and the bowel (as it were), unravelled. It was soon perceived that the portion of bowel protruded, *involved all the small intestines*, beginning from the upper third of the *jejunum*, and the whole of the *cæcum* which had been torn away from its attachments in the right iliac fossa. I now passed my finger freely from the cavity of the abdomen through the opening by which the bowels had passed externally. It was the impression, I believe, of every one present, that there had been a rupture of the perineum. What was our astonishment, when, after further dissection, we discovered that there was a *rupture of the rectum* upon its anterior portion, five inches above the anus; and that *the intestines had passed through the aperture made by the rupture, into the rectum, and thence externally per anum*.

The intestines that had protruded were then cut off, and the rectum with the sphincter ani carefully removed. Further examination proved that there was no rupture of a single fibre of the sphincter ani, but a simple dilatation; and thus *revealed the extraordinary fact of a person's having actually passed per anum the greater portion of the bowels in the body*. A case similar to which no medical gentleman present had ever seen or read of.

The rectum presented a slate-colored appearance over nearly its whole internal surface, and around the edges of the rupture the mucous membrane was quite black. In short, it abounded with marks of chronic inflammation.

The mucous membrane of the stomach was not at all unhealthy. The womb was examined, but presented nothing abnormal.

How then did this extraordinary protrusion happen? I think the explanation may be given as follows:—

The fact of the rupture of the rectum is of itself a sufficient proof that there was disease of long standing in that bowel. A portion of the small intestines lay in contact with the diseased portion of the rectum, and when the coats of the rectum burst, slipped into it, and then, portion by portion was involved and then expelled; on precisely the same principles that defecation is carried on. A foreign body was felt on the mucous membrane of the rectum, and every action proper for that purpose was called into service to expel it. Hence those continued and bearing-down pains which were mistaken by the sapient midwife for parturient ones.

No examination of any other cavity than that of the abdomen was made.

When the woman was first taken with pain, she tied a handkerchief very lightly around her waist.

I have not been able to find any written record of a case in any way similar to this, and hence I thought it would not be uninteresting to the society to present it to their notice.

CASE VI. *A singular protrusion of six feet of intestine with the mesentery, through a rupture in the anterior wall of the rectum; reduction by opening the abdomen; death.* By B. C. Brodie, Esq. *Lancet*, 1827, vol. xii.

Ann Magan, a middle aged woman, at about eleven o'clock in the evening of Saturday, the 21st of April, was seized with pain in the abdomen, and

sickness. After straining violently in the act of vomiting, she discovered an unusual appearance, which led her to believe that she had suffered a *miscarriage*, and she sent for a midwife. On the following day she was seen by Mr. Mullins, of New Street, Dorset Square, who discovered a large portion of the small intestine hanging out of the orifice of the anus. The case being *so remarkable*, Mr. Mullins recommended that the poor woman should be taken to St. George's Hospital, where she was accordingly admitted about six o'clock in the evening of the 22d of April.

At this time *not less than two yards of small intestine*, with a corresponding portion of the mesentery, were seen protruding through the anus. The whole mass bore marks of a high degree of inflammation, and the intestine was much distended with air and liquid feces. On examining the rectum with the finger, it was found that there was a transverse slit in the anterior part of it, about two inches above the anus, through which the protrusion of the small intestine had taken place. On attempting to reduce the protruded intestine, at first it readily re-entered the anus, but, when about one-half of it had disappeared, the reduction became difficult, and about one-fourth part of it could not be reduced at all. In fact, no method could be devised by which even a part of it could be made to pass through the slit in the rectum, so as to resume its natural position in the peritoneal cavity. The pressure of the hand caused the small intestine to ascend into the rectum, where it lay only as long as this pressure was continued; nothing further in the way of reduction could be accomplished.

Under these circumstances, Mr. Brodie made a longitudinal incision in the linea alba, about two inches in length, below the umbilicus. The incision was continued through the peritoneum into the cavity of the abdomen, and the fingers being introduced at this opening, by gently pulling the small intestine, that portion of it which had protruded through the slit of the rectum, was readily drawn back into the abdomen. It having been ascertained, by examining the rectum with the finger, that the reduction was completed, the edges of the wound in the linea alba were brought together by sutures.

After the operation, the pulse was scarcely perceptible, the extremities were cold, and the patient was sick, throwing up again immediately whatever she swallowed. In about two hours the pulse was somewhat stronger, and the extremities were warmer; but the restoration of the vital powers was imperfect, and after some hours they again began to fail; and the poor woman died about six o'clock in the evening of Monday, the 23d of April. (How strange!)

On examining the body, the peritoneum generally was found much inflamed, and, in many parts, covered with a layer of coagulated lymph. That portion of the intestine and mesentery which had formed the protrusion was, however, less inflamed than it had appeared to be previously to the operation. There was a transverse opening in the anterior part of the rectum, without any marks of ulceration in the neighborhood; whence it was concluded that the opening was the result of accidental laceration!!

CASE VII. *Extraordinary prolapsus of the rectum*. By L. A. Dugas, M. D., Prof. of Surgery in the Medical College of Georgia. Southern Med. and Surg. Journal, 1855.

Having recently been consulted in reference to an extraordinary case of prolapsus of the rectum, I deem it of sufficient interest to record the following notes:—

Mr. G., a native of Kentucky, but now a resident of Mississippi, about 35 years of age, of athletic frame and fine constitution, is, and has always been

in fine health, with the exception of the infirmity to be described. About twelve years ago, during an attack of bowel complaint, he experienced for the first time some prolapsus of the rectum. The bowel affection soon subsided; but he was left subject to occasional descent of the intestine, which gradually grew more frequent, and finally attended each alvine evacuation. With the increased frequency of the prolapsus, the extent of the protrusion also became greater, and in a few months reached the present dimensions.

Mr. G.'s state is, now, that of apparently robust health; his bowels are moved regularly every morning; his feces are moulded and otherwise of natural appearance; but each evacuation is preceded by expulsive efforts and the protrusion of 8 or 10 inches in length of the rectum, which is inverted, and so much dilated as to offer a diameter of from 6 to 7 inches. The protruded mass is of the shape of a pear, the smaller extremity being at the anus, which is dilated to from 3 to 4 inches in diameter. In the centre of the larger extremity may be seen the aperture of the upper portion of the intestine about an inch in diameter, and from which the feces issue upon the continuance of expulsive efforts. The mucous surface of the inverted mass appears healthy and the protrusion is effected without pain.

For some time after the occurrence of this infirmity, the patient would reduce the prolapsus in the usual way, by pressure with the hand; but he has since acquired the faculty of doing so without any mechanical force and by the mere effect of position and volition. He now can, and has for years been able to, at any time, induce this extraordinary prolapsus by expulsive efforts in a few moments, and reduce it as promptly. For the latter purpose he places himself upon his knees and face, so as to bring the pelvis at the summit of an inclined plane formed by the trunk, and, to use his own expression, draws in the bowel by holding his breath; when it promptly re-enters the abdomen with a flapping sound as though a column of air rushed in with it. The anus then closes, and presents a perfectly natural aspect. I have seen this feat performed repeatedly, and even at intervals of ten minutes, with surprising facility.

The force by which the protrusion is effected is easily understood; that by which the return is accomplished is probably a combination of gravitation, by elevating the pelvis, and of atmospheric pressure, by fixing the abdominal muscles at the same time that an effort is made to elevate the diaphragm, and consequently to produce a vacuum in the abdominal cavity.

The patient states that, unless he has taken some laxative, no fecal matters ever issue until the prolapsus is complete. We might infer from this that some stricture exists to a sufficient degree to prevent more consistent matters from reaching the lower intestine; but this is negatived by the fact that his discharges are moulded of the usual size. The orifice seen when the protrusion is complete, appears normal. Walking, long standing, or any muscular effort, will induce a partial prolapsus, so as to incapacitate the patient for the active duties of life, unless when on horseback. I proposed to treat his case with the actual cautery, according to Dupuytren's favorite method; but he was unwilling to submit to it, and returned home.

—We are not certain that this is the same case, but we saw in Augusta with Dr. Dearing, formerly mayor of that city, one quite as singular as this, just before moving west.

SECTION III.

AFFECTIONS OF THE PELVIC BONES.

CASE I. *Fracture of the anterior inferior spinous process of the right ilium by muscular contraction.* By Charles W. Ashby, M. D., of Culpepper Co., Virginia. Med. Examiner, 1852.

A strong, athletic negro man, 19 years old, was walking rapidly from a spring, in view of an approaching storm, and as the night was very dark, he stepped into a gully about a foot and a half deep. He had upon his head at the time an unusually large tub of water. Although he did not fall, he was so disabled as to require the assistance of men to carry him to the house.

There was a great loss of power in the right leg, though not entirely deprived of muscular control, except as to elevation. As I could make the limb perform all the natural movements without much pain, and as I could not perceive, after the most careful examination, the slightest distortion, no lengthening or shortening, I decided, very confidently, that there was neither fracture nor dislocation. But the boy, who was more than ordinarily intelligent, insisted most strenuously that he heard and felt something give way, not only at the time the accident occurred, but whilst I had been making the examination.

Upon elevating the leg at right angles with the body, and letting it down rather suddenly, I now, for the first time, heard a crepitus, I confess, much to my surprise. By this particular movement and *by no other*, the crepitus was so distinct as to be heard, not only by myself again and again, but by all the bystanders. What fracture have I here? was a most natural inquiry. From the history of the case, I was, at first, inclined to suspect, though in a young subject, a fracture of the neck of the bone; and being aware of the varied nature, as well as great obscurity of this accident, my mind was directed most anxiously to its investigation. Reasoning by exclusion, I became satisfied that this could not be the fact: there was not a single symptom which is usually present in this accident—there was little or no pain or tumefaction about the joint, and, indeed, not a sufficient amount of irritation to warrant the belief that there was a fracture of any of the large bones, either of the pelvis or leg.

I requested the boy to direct my hand to the spot where he felt the greatest amount of pain. He placed it in his groin, where I detected, for the first time, a good deal of tenderness and tumefaction. Pressing two fingers of my left hand firmly upon this spot, and with my other hand elevating the leg, and letting it down as before, I not only heard the crepitus, but I felt distinctly a spiculum of bone moving under my fingers. This manifestation, not *very* painful to my patient, was performed not once, but I may safely say more than twenty times, and invariably with the same result, before I decided *positively* as to the *precise* character of the fracture.

I was surprised to find that I had been poring over this case at the dead hour of night, for more than three hours. I had never heard or read of such an accident, and therefore only those of my professional brethren who know me best, can appreciate the deep anxiety I felt as to the making out a correct and satisfactory diagnosis.

The maxim that "there is nothing new under the sun," often repeated by a distinguished professor of my alma mater, did not fail to make an impression on my mind, and, properly understood, riper years have served only to deepen that impression. I have not the slightest shadow of a doubt as to the

correctness of my diagnosis. As to its novelty, I have the high authority of your name, as well as that of other distinguished surgeons, and yet I am of the opinion that the accident had occurred before, but either has not been recognized, or has not been thought worthy of being recorded.

Whether the process was pulled off by the powerful contraction of the rectus muscle, or by the tremendous jar of the head of the bone, thrown in the act of stepping forward, upon the outer edge of the acetabulum, or by both causes conjointly, I leave for others to decide.

The treatment of this case was as effectual as it was simple, and the result, I think, confirmed the diagnosis.

After flexing the limb, a roller six or eight yards long was passed firmly around the thigh, so as to control muscular action, then passed firmly over a wet compress, placed over the process, thence around the body and back over the compress and around the thigh again. The boy was placed on his side, and experienced immediate relief, so that he slept soundly the balance of the night. Strict rest was enjoined, and he suffered little or no pain after the bandage was applied. In four weeks he was walking about, but wore the bandage and compress for several months, as he says it gave him great support.

—Will the author permit us to add that he may after all have been mistaken in his diagnosis? The skeleton will alone reveal the fact.

CASE II. A portion of bone, probably the pubis or ischium, removed after fracture, from the bladder, surrounded by a calculous mass. By Paul F. Eve, M. D. Southern Med. and Surg. Journal, 1846.

In January last, I received a letter from an intelligent physician of this State, who mentioned that while on a recent visit to Alabama, he had seen a negro woman laboring under symptoms of stone, and that he had recommended her to be sent to my Infirmary. Upon the arrival of the patient on the 8th of this month (January,) the following history of the case was obtained: She is now twenty-four years old, is married and has borne one child: is of good constitution, well made, and has enjoyed uninterrupted health up to the time of her accident. About four years ago, while in a stable loft, she fell, and in descending got astride a projecting pin, which injured her very seriously. She states that her external organs of generation were greatly contused, and that it was nearly a year before she could walk much or with ease. Her master writes: "There was great contusion of the soft parts, but a fracture I never could detect. After the fall, she was confined to her bed six months, unable to walk, and for twelve months could not labor." Although her owner is a physician, I do not understand that he is a practitioner of medicine; and all will acknowledge how obscure is the diagnosis of fractures of the pelvis. Without, therefore, any reflection whatever upon his intelligence or knowledge of anatomy and surgery, the pubis or ischium, or both, may have been broken by the fall which the patient sustained, without being detected. If no fracture occurred, how account for the long confinement and inability of the patient, even to walk for months? After her recovery, she was hired out, but becoming unable to labor, she was returned home. For the past four months the catamenia have failed, and she has experienced great difficulty and irregularity in urinating. On examination per vaginam, the finger encountered a rough body projecting into that canal through a vesico-vaginal fistula, an inch and a half behind the orifice of the urethra. A sound in the bladder came in contact with a calculus. The urine was bloody, and discharged every few minutes, and could not be retained. The neck of the uterus was soft, irregular, and enlarged.

Jan. 9. A dose of oil was given, which operated well; a warm hip-bath was prescribed twice a day; flaxseed tea and moderate diet.

10th. Operated at one o'clock, assisted by Drs. Dugas, Means, Martin of Cobham, Shaw of Covington, and in the presence of the Medical Class. As a vesico-vaginal fistula (so much to be apprehended in lithotomy in the female), already existed, a grooved director was passed through the urethra and fistulous opening into the vagina, and by a probe-pointed bistoury it was cut out. By the section thus made, a finger was introduced into the bladder, and with the calculus forceps, a piece of bone, coated with uric acid was extracted. This was the foreign body projecting into the vagina, and was irregular in shape, and about three-fourths of an inch square. The bladder was now found filled with a soft calculous deposit, which would allow the blades of the forceps to close through it. After breaking up this mass, another and a larger piece of bone was felt lying behind the pubes. From its position and size, much difficulty was encountered in removing it. The urethra was incised towards the clitoris, and Dr. Dugas also attempted to dislodge it. By the finger it was fortunately thrust from behind the pubes, and then withdrawn in the forceps. This fragment was much more voluminous than the first one extracted, and resembled somewhat the body of the pubis. It was closely impacted in the position described, but the coats of the bladder felt to the finger entire. The only opening in its membranes besides the incisions, being the fistula mentioned, and which was about the size of a rifle ball. Injections were now employed to wash out the bladder, and the patient placed in bed.

The duration of this irregular, and as is believed singular operation, was nearly an hour, and few thought the patient could so soon or so completely recover. Incontinence of urine from the free incisions in the urethra, as well as from the previously existing vesico-vaginal fistula, was certainly expected.

11th. Called in haste to the patient, at 6 A. M. Found her complaining of pain and soreness throughout the region of the bladder. Prescribed a tepid bath, morphine, diluent drinks, and repose. In the afternoon she is easier.

12th. Doing remarkably well, even retaining the urine better than could have been expected so soon. Sat up in bed a few minutes.

13th. Is decidedly improving.

17th. Has continued to get better. Examined the bladder, and detected a calculus. Failed to remove it. Failed again on the 18th, when she was instructed to retain her urine as long as possible, and then to pass it while in the hip-bath. A calculus weighing 45 grains was thus expelled on the 20th.

30th. The tip of the finger can only be introduced into the bladder. No foreign body can be detected in it. The urine has become clear and healthy, and the patient can retain it an hour or two. She takes moderate exercise in the house.

February 5. Has gained much flesh. Complains only of incontinence while walking. She left to-day for the country, preparatory for returning home to Alabama.

The foreign bodies extracted from the bladder in this case, were subjected by Dr. Means, Prof. of Chemistry and Pharmacy, etc., to an analysis. The calculous mass was chiefly composed of uric acid. The pieces supposed to be bone were sawed in two, and presented a cancellated appearance, and were reduced by chemical tests to animal matter and phosphate of lime. I regret not preserving the total weight of all the matter extracted by the operation.

CASE III. *Fracture of the sacrum impeding delivery; death.* Lancet, 1846.

Madame C——, thirty years of age, about four months pregnant with her fourth child, was coming down stairs, when, her foot slipping, she fell, and bounded on several steps till she reached the bottom. She immediately felt excruciating pain in the region of the sacrum, and was obliged to be carried to her sofa. The pain continuing, her medical attendant was called in to see her. He bled her, and gave her an anodyne, etc. The pain continued for some weeks, but gradually subsided, and some three months after the accident she was able to attend her ordinary duties for a short time, but the pain returned, and continued with unabated violence till the full time of her pregnancy.

The pains were very active, and, as far as could be ascertained, the os uteri was fully dilated, but the vagina was almost completely closed by a hard tumor, connected, apparently, with the sacrum. She was exceedingly weak, emaciated to a great degree, and from the certainty that the child had been dead for some time, the propriety of performing craniotomy was suggested.

This course would not be submitted to, and the patient died. The sacrum was found broken into four pieces; two of them projected out of its usual line, and all were joined by a firm callous band, which formed the projection into the vagina, and completely prevented a natural delivery.

CASE IV. *Fracturing the os coccygis to facilitate delivery.* By R. McSherry, M. D., U. S. Navy. American Journal Med. Sciences, 1850.

Dr. Summers, while practising in Maryland, was called, in consultation, to see a married woman, at an advanced stage of her third labor. She had lost both of her previous children during parturition. The doctor, on examination, found the head ready for expulsion, but with a huge gash, or section, as if the skull had been cleft by some sharp instrument.

In time the child was delivered, dead, the mother having suffered greatly, in mind and body. The doctor then made another, and a thorough examination of the parts of the mother, and discovered clearly, what was before uncertain, that the coccyx presented its point, nail-like, firmly upwards and inwards into the cavity of the pelvis. He recommended to his patient either to visit a distinguished surgeon, to learn whether his art could relieve her, or to make up her mind to live *absque marito*. The lady did not take his advice, but in due time she was taken again in labor, and sent for Dr. S. in the first stage of it. The doctor, knowing the condition of things, set to work earnestly to draw the coccyx in a line with the sacrum by strong traction efforts, hoping to retain it sufficiently long to give the child a passage. He soon found that he was not likely to succeed, so that he determined, if possible, to break the connection between the two bones. By the application of both thumbs, with some effort, he succeeded perfectly; an audible snap soon gratified his ears, and in a very few minutes after, to the great joy of the parents, a living and healthy child was born. The lady declared that her sufferings were quite trivial, in comparison with her previous labors.

The doctor delivered her afterwards safely in two successive labors; but upon each occasion he found greater difficulty in breaking down the osseous union between the bones.

He learns that, in a subsequent labor, she lost the child, as in those before she came into his hands.

CASES V. and VI. *Dislocation of bones of the pelvis.* Southern Med. and Surg. Journal, 1849.

M. Murville, in a memoir presented to the French Academy of Medicine,

on luxations of the pelvic bones, relates the two following very remarkable examples of this accident.

The first was the case of an officer, who fell from a second-floor window, and alighted on the tubera ischii. The sacrum was displaced downwards by the weight of the body. On examination, the crests of the ilia were found to be almost touching the false ribs; the os coxeygis much shattered, projected considerably below. The patient complained of great pain in the sacro-iliac symphyses; had paralysis of the bladder and rectum; small pulse and other signs of collapse. He was restored somewhat by stimulants, and when reaction was fully established, he was treated antiphlogistically, the displaced bones being maintained as motionless as possible. No attempt at reduction was considered advisable. This treatment was marvellously successful; not only did the patient survive, but the paralysis diminished, and in ten days the patient was able to walk with difficulty.

The second case is unique. An officer during a review was run away with, the horse at the same time plunging violently; in one of the plunges he was thrown considerably from his saddle, upon which he descended again with such force as to lacerate the left side of the pelvic arch, without injuring the skin. A second plunge of the animal added to the mischief, completely rupturing the ligaments of the symphysis pubis. When examined, a large inguinal hernia was discovered on the left side, and in the perineum a tumor projected as large as the fist, which could be pushed upwards into the pelvis. The symphysis pubis was separated to an extent which allowed the hand to be insinuated between the ossa pubis. The hernia was reduced, and the bones kept in apposition by bandages, and in three months the patient was able to walk. M. Murville, upon this case, founded some remarks upon the feasibility of the operation of division of the symphysis in labor. In a discussion which ensued, M. Malgaigne doubted that it was a case of simple dislocation, thinking it probable that there was also fracture.

CHAPTER VIII.

THE GENITO-URINARY ORGANS.

SECTION I.

AFFECTIONS OF THE SCROTUM.

CASE I. *Cure of hydrocele by a stab.* Lancet, 1843.

A French naval surgeon says: On board of our ship, while in Toulon Roads, was one Napoleon Agostini, a Corsican by birth, who had on the left side an enormous hydrocele, which he refused to have operated on. He had been allowed to go ashore, where, with some of his shipmates, he entered a *cabaret*, where he stayed drinking for some hours. Having all got intoxicated, they quarrelled and fought, and one of the men made a blow at Agostini with a knife, by which his trousers were cut, from below the waistband half-way down the thigh. An incision, about an inch and a quarter in length, had been made in the scrotum, which not only suffered the fluid but the testicle also to escape. Next day, before the effects of his drunkenness had disappeared, the

man was brought on board. The testicle was cleaned, returned into its proper situation, and retained there by four sutures. Moderate adhesive inflammation was set up, and the wound had healed by the fourteenth day. Three months have elapsed and the hydrocele has not returned.

CASE II. *A large hydrocele cured by a stab.* By P. Ingram, Surgeon, Manningtree. *Lancet*, 1843, vol. xlv.

The account of a cure of hydrocele by a stab, in the *Lancet* of last week, reminded me of a similar occurrence which took place when I was in Calcutta, in 1835. A Sepoy, in a state of intoxication, repaired to the Soba Bazaar to purchase a pumulo, a species of fruit similar to an orange, but generally about six times larger. The Hindoo who kept the shop very quietly informed the Sepoy that he had sold all his fruit of that description, and of course, could not at that time supply him with one. The Sepoy became quarrelsome, and the Hindoo, in his turn, quarrelled with the Sepoy, stoutly denying that he had any pumulos in his possession. The enraged Sepoy then made a thrust with his bayonet at the Hindoo's langooty (a handkerchief used for the purpose of concealing and supporting the scrotum, similar to a suspensory bandage), swearing that he had one concealed there; when, to the surprise of all present, the shop of the Hindoo was immediately inundated with water. The bayonet had perforated a very large hydrocele. The Sepoy was immediately taken into custody, and after he became sober expected nothing less than hanging for murder, but he was only slightly punished, and the Hindoo had the happiness, some time afterwards, of thanking the Sepoy for removing his "pumulo," *alias* curing his hydrocele.

CASE III. *A fish-bone in the scrotum causing gangrene.* By M. Burggræve. *Presse Médicale Belge*, 1855.

On the 12th of March last, the patient X., presented himself at the Ghent Dispensary with a considerable enlargement of the scrotum. As he complained but very little of pain, I thought the swelling was produced by wearing a double truss, and I ordered rest and the use of resolvent lotions.

Eight days after, the patient was brought to hospital, the engorgement having terminated in gangrene of all the median portion of the scrotum, from the perineum to the penis. The ichorous discharge had already become infiltrated to a considerable distance, and had produced an emphysematous state of the penis; the pulse was small, the countenance Hippocratic, and the skin cold. The urine flowed freely, there was no urinous odor, and the catheter met no obstruction in the urethra. The rectum appeared to be equally free from the presence of any foreign body. The patient declared that since he first applied for advice, he had not experienced any derangement of the digestive organs. He did not remember to have swallowed a foreign body, or to have hurt himself; his age further excluded the idea of his having introduced a foreign body into the urethra.

In this state of things, I hastened to make incisions and numerous scarifications, in order to limit the gangrene, and to give issue to the ichorous fluids and gases. In sounding the sinuses with the finger, I perceived a sharp tapering body, placed across the root of the scrotum, and entangled in the flesh. The patient, to my inquiries, repeated the statements given above. I disengaged the thorn-like substance, and found that it was a bone of a plaice—a fish which is much eaten among the people.

The presence of this bone in the scrotum, where it had caused such considerable mischief, admits of no other explanation than that having been in-

advertently swallowed it had made its way longitudinally, or in the axis of the digestive current, and that it had thus traversed the cardiac and pyloric orifices of the stomach, the intestinal convolutions, ileo-cæcal valve and the large intestine. Having arrived at the sphincter ani, it had perforated this muscle, and so passed out into the areolar tissue of the perineum, where it entered the scrotum by a worming process, similar to that of swallowed needles, of which numerous examples exist.

It is not likely that the bone perforated the rectum, as it should then have become lodged in the ischio-rectal sinus, where it would have produced a fistula.

The case I have now reported is interesting as showing the efficacy of extensive incisions and scarifications in infiltration and gangrene of the scrotum. To wait, is to allow the mischief to spread.

SECTION II.

AFFECTIONS OF THE TESTES.

CASE I. Appearance of a patient aged seventy-one, who was castrated when only two years old. Journal des Connaissances Med.-Chir. Southern Med. and Surg. Journal, 1845.

In the Hotel of the Invalides is a man aged 71 years, who was castrated at Sens when two years old, by a villainous quack, to cure him of hernia. This mutilated person is of small stature, his extremities are slender, his bones feeble, his voice sharp, and his chin without beard. He does not detest women, but when near them has only fugitive desires, and his enjoyment in coition has always been scarcely appreciable. His penis, like all organs which do not perform their functions, is atrophied, and the prepuce is much longer than the gland. In this stunted body, which has evidently been arrested in its development, there has nevertheless been energy and courage. This individual, though exempt from military service, joined the army; he was in the wars of the French Empire, and the scars which he bears are authentic certificates of his ardor in battle, and of his bravery. At present, one is struck in passing his bed, with all the traits of an old woman. Notwithstanding his advanced age, his memory is good; he relates, with precision, the events in which he assisted, and his language is expressive of much goodness of heart. Everything about him breathes the air of sadness and the impress of a vague melancholy; a regret attaches to each step of his life, and which has its origin in the dreadful mutilation to which he was made to submit in childhood.

CASE II. Account of a man who had lost both testicles. Curling on the Testis.

A man had one of his testes removed in 1799. In June, 1801, the other testis was removed by Sir A. Cooper in Guy's Hospital on account of a chronic abscess. He had been married prior to the loss of one testis. Four days after the second operation it was found that he had had during the night an emission, which appeared upon his linen. After he had recovered and quitted the hospital Sir A. Cooper repeatedly visited him for many years. For nearly the first twelve months he stated that he had emissions *in coitu*, or that he had the sensations of emission. After two years he had erections very rarely and very imperfectly, and they generally immediately ceased under an attempt at coitus. Ten years after the operation, he said he had during the past year been once connected. In 1829 he visited Sir A. Cooper, because he was a severe sufferer from piles. He then stated that for years he had seldom any

erection, and then that it was imperfect; that he had no emissions from the first year of the operation; that he had for many years only a few times attempted coitus, but unsuccessfully; that he had once or twice dreams of desire, and a sensation of emission, but without the slightest appearance of it. The penis was shrivelled and wasted. He shaved once a week, and sometimes twice. His voice, naturally rather feeble, remained as at the time of the operation.

CASE III. *Russian mode of castrating horses.* Veterinarian—Lancet, 1844.

A Russian, who wished to castrate a horse, seized him by the thighs and hocks, held him firmly in his nervous grasp, and then by a sudden movement equally rapid and cruel, tore off the testicles with his teeth, which served him at once for bistoury and instrument of torsion. This extraordinary man required no assistants—no apparatus wherewith to fix the horse before he commenced his strange and cruel operation. He practised it repeatedly, and always with success, and stated that such was the mode in which it was performed in his native country.

Almost incredible—if authentic, it is doubtful whether the man or the horse was the greater brute.

SECTION III.

AFFECTIONS OF THE PENIS.

CASE I. *Puncturing the cavernous bodies of the penis for priapism.* By Prof. Velpeau. St. Louis Med. and Surg. Journal, 1853.

Professor Velpeau performed a novel and interesting operation at la Charité, a short time since, which I do not believe has ever, under analogous circumstances, been hitherto practised, at least it is the first time I have seen or heard of it. The operation was puncture of the cavernous bodies for the relief of an obstinate priapism, which had resisted all ordinary treatment. No cause could be ascertained for the affection. The puncture was made with an exploratory trocar and canula, a short distance behind the glans penis; the cavernous bodies were traversed from side to side. This puncture was exceedingly painful, but was immediately followed by complete flaccidity of the penis. The operation is most simple, the success immediate, and in obstinate priapism will be found, no doubt, a valuable expedient for its permanent relief. There have been no disagreeable consequences from the operation; still a puncture, however slight, made in such tissue, might be followed by unpleasant results. He was led to the performance of the operation by having communicated the case to a physician, who in reply, told him that he had been affected for a long time with priapism, and involuntarily punctured his penis with a pen-knife; the erection immediately ceased, and he never afterwards suffered from it.

CASE II. *Ligature of the penis in an infant, applied probably by the nurse in revenge.* Rust's Magazine—Lancet, 1831.

A Jew boy, four weeks old, was suckled by a nurse whom the family became dissatisfied with, and dismissed. Two days afterwards Dr. G. was sent for on account of painful swelling of the boy's penis, when he found a long hair five times wound and tied round the root of the penis. With great difficulty the hair was removed from the deep incision it had made, which emollient applications speedily healed; but had it remained a short time longer, gan-

grene would inevitably have occurred. "Very probably," says Dr. G., "the nurse wished in this manner to revenge herself for her dismissal."

CASE III. *Priapism, with retention of urine, for thirty hours.* Gazette Médicale de Paris—American Journal Med. Sciences, 1842.

A young man, twenty-two years of age, of good constitution, and fair complexion, with a largely developed genital system, came to Paris in the month of September, 1841. He had been in the habit of indulging in sexual intercourse in moderation. On the night of the 10th, after no irregularity of diet, and after *coitus*, which was attended by an extraordinary degree of voluptuousness, had been performed, the erection of the penis still continued, accompanied with burning pains in the perineum, and along the course of the urethra. From time to time exacerbations took place, followed by a general spasm, during which there was a kind of emission. When M. Demeaux saw him, at three in the morning, he found him much debilitated, with an anxious countenance, burning skin, bathed in perspiration, and a pulse 110, full and hard. The spasms and the emissions still continued. The penis, much distended, and in contact with the belly, felt as hard as a piece of wood. The glans was of a purple color; and the testicles, drawn towards the abdominal rings, were painful to the touch. The bulb was swollen, and formed a hard tumor, about the size of a hen's egg; there were urgent but ineffectual efforts to pass urine. He was ordered to lie on a hair mattress; to be bled to four palettés; to have a cold hip-bath; an enema with two grammes of camphor, and to keep a bladder of ice between his thighs. 5 P. M. The emissions had ceased since taking the cold bath, but the local symptoms were still the same; to have a draught with fifty centigrammes of camphor; fifteen leeches to be applied to the perineum. 11 P. M. The spasms and emissions have returned; the bladder can be felt, forming a round tumor in the hypogastrium, and exceedingly painful on pressure. Leeches to be applied to the perineum, in such a manner as to keep up a continued loss of blood. At two in the morning, after sixty leeches had been applied, the penis became somewhat smaller.

He was then placed in a hip-bath, at the temperature of the surrounding air, when he experienced indescribable relief. In about ten minutes he made urine; he was taken from the bath and immediately fell asleep. From this time all went on well, although the catheter had to be introduced several times. At the end of four days he was able to leave Paris, but his left testicle was still painful on pressure.

CASE IV. *Fracture of the penis in a young man just married.* By W. S. W. Ruschenberger, M. D., U. S. Navy. American Journal Med. Sciences, 1849.

A young man, native of Canton, applied to Dr. Parker for relief. He had been married about eight months. On the nuptial night, he met with insurmountable difficulty in his attempt to establish sexual intercourse with his bride, and in an effort, on that occasion, sustained a severe, and most probably, irreparable injury, which caused great pain. Since that night, erection of the penis is limited to about a half an inch of its root, the extremity of the organ, with its glans, hanging flaccid.

On examination, a well-defined transverse space, through the corpora cavernosa, about a half-inch from the pubes, the site of fracture, was found to separate the penis into two parts.

No attempt was made to remedy this serious misfortune.

CASES V. and VI. *Rupture of the corpus cavernosum penis, illustrated by two cases.* By Valentine Mott, M. D. Velpeau's Operative Surgery by Mott, vol. iii., 4th edition.

The affection to which I refer has been humorously styled a *fracture of the penis*. This is, however, a misnomer in surgery, as there is in the human organ no bone entering into its composition in the normal state. In a strictly surgical sense, no part can be said to be fractured which has not either bone or cartilage in its constitution. The term rupture or laceration is the proper epithet by which it should be distinguished. The cases, therefore, ought to be termed "lacerations of the corpus cavernosum of the penis."

A. B., a young man, living in Bergen, New Jersey, having been recently married, had his wife, a day or two after this event, leave him to visit a parent who was ill, a few miles distant, where she was detained over night. The bridegroom, on rising from his bed in the morning, found the penis in a vigorous state of distension. In his haste to dress, not being patient with this natural state of things, and without giving a reasonable time for its energy to abate, he struck it with considerable violence against the bedpost. At the instant this was done, a noise was heard of something breaking, and at the same moment, a manageable condition of the member followed. On examination, as the bedpost was found to be sound, he concluded that his organ had suffered the injury. He therefore alarmed the family, and it was soon reported that he had *fractured his penis*.

An extensive extravasation of blood immediately followed the injury, through the entire penis, distending it to twice or more times its natural size, changing it very quickly to a dark livid hue, and presenting altogether a most frightful and disgusting aspect.

The greatest imaginable alarm was now excited in the mind of the patient and his friends. Professional aid was summoned immediately from the neighborhood, and from the novelty and urgency of the case, further advice was sought from this city. Among others sent for, was the newly-made bride, who, on being informed of the nature of the fracture, plaintively and innocently remarked, *she was sure it never would have happened if she had been at home*.

The tumefaction of the organ continued to increase for more than twenty-four hours, until the prepuce rolled over the glans penis, as in watery effusion, and erysipelatous infiltration of the filamentous tissue of this part.

Strict rest was enjoined, in a recumbent posture. General antiphlogistic treatment was pursued. The penis was turned over the pubes, and cold discutient lotions were directed to be constantly applied. By pursuing this plan of treatment, the extravasated blood after a few days began to be absorbed, and after a short time was wholly removed, and the member was restored to its normal condition and usefulness.

B. C., a young and healthy man, about thirty-five years of age, unmarried, fellow of the Academy of Medicine, came under my notice on the morning of the 13th of May, 1848.

In a very considerable state of alarm, he made the following statement to me: That on rising from bed he found the penis in a full and vigorous erection, and being somewhat in haste to dress, applied his hand on the left side of the member, and suddenly forced it into his drawers. At the instant of doing it, he felt a crack, as he expressed it, and felt something tear. At the same time the penis began to enlarge, and in a few minutes was extended to twice the size it had in a state of natural erection, and without the hardness peculiar to this state. As he expressed it, his impression at the instant was that he had fractured it, as there was a stinging sensation of pain.

Very soon after, I saw him, and the size was nearly double that of a natural erection, soft throughout, and of a dark purple color. The extravasated blood reached completely to the extremity of the prepuce, so that the merest point of the glans penis could be seen. On turning it a little to the right side some pain was felt at a point on the side of the left corpus cavernosum, about half an inch from the going off of the scrotum, and it was there somewhat tender to the touch.

From the statement of the patient, and the unseemly and frightful appearance of the organ, there could be no doubt that the left corpus cavernosum was lacerated.

I advised the doctor to remain quiet, in a recumbent position, turn the penis up over the pubes, and use a lotion of camphorated spirits. In the evening it had increased considerably in size. The regio pubis was also much tumefied, and the enlargement had extended over the left side of the scrotum. Leeches were now spoken of; but I feared that they might be followed by erysipelatous inflammation and some of its fearful consequences. I therefore advised that a bladder partly filled with pounded ice should be applied over all the affected parts during the night, and the penis turned up over the abdomen. This was cheerfully and promptly done. The object in view was to promote the absorption of the extravasated blood, and more particularly to prevent any erection from taking place during the night, by which the extravasation would be greatly increased. During the night, however, while asleep, the bladder was displaced and a partial erection took place, which was accompanied with severe pain at the injured part, and an apparent increase of the extravasated blood. It instantly awoke the patient, when he reapplied the ice, with immediate relief.

The next day the general tumefaction of the penis was a little diminished, but the dark blue color was considerably increased. It was now also apparent over the entire swelling of the scrotum.

He was desired to persevere in the same treatment.

June 5. Twenty-third day from the accident. The doctor informs me that all pain has left him, and that the extravasation has entirely disappeared, that the incurvation to the opposite side has in a great measure passed away, and that the hardness is considerably lessened. In a word, that this organ has nearly returned to its normal condition.

CASE VII. A young gentleman in a bad predicament; his penis fastened in the neck of a bottle. By A. B. Shipman, M. D., of Syracuse, New York. Boston Med. and Surg. Journal, 1849.

A few months ago I was called in great haste to a young gentleman who was in a most ludicrous, yet painful condition. I found, on examination, a bottle, holding about a pint, with a short neck and small mouth, firmly attached to his body by the penis, which was drawn through the neck and projected into the bottle, being swollen and purple. The bottle, which was a white one, with a ground-glass stopper, and perfectly transparent, had an opening of three-fourths of an inch in diameter only; and the penis being much swollen rendered its extraction utterly impossible. The patient was greatly frightened, and so urgent for its removal that he would give me no account of its getting into its present novel situation, but implored me to liberate it instantly, as the pain was intense and the mental anguish and fright intolerable. Seeing no hopes of getting an explanation in his present predicament, and after endeavoring to pull the penis out with my fingers, without success, I seized a large knife lying on the table, and with the back part

of it I struck a blow on the neck of the bottle, shivering it to atoms, and liberating the penis in an instant, much to the delight of the terrified youth. The glans penis was enormously swollen, and black, as was the prepuce; both were vesicated, as though scalding water or fire had been applied to them. He complained of smarting and pain in the penis, after the bottle was removed; and inflammation, swelling, and discoloration continued for a number of days, but by scarification and cold applications, subsided; yet not without great apprehensions on the part of the patient, and a good degree of real pain in the penis.

The reader is probably anxious to know, by this time, how a penis, belonging to a live man, found its way into so unusual a place as the mouth of a bottle. I was extremely curious myself; but the fright and perturbation of the patient's mind, and his apprehensions of losing his penis entirely, either by the burn, swelling, or inflammation, or by my cutting it off to get it out of the bottle, all came upon him at once, and overwhelmed him with fear. Now for the explanation. A bottle in which some potassium had been kept in naphtha, and which had been used up in experiments, was standing in his room; and wishing to urinate without leaving his room, he pulled out the glass stopper and applied his penis to its mouth. The first jet of urine was followed by an explosive sound and flash of fire, and quick as thought the penis was drawn into the bottle with a force and tenacity which held it as firmly as if in a vice. The burning of the potassium created a vacuum instantaneously, and the soft yielding tissue of the penis effectually excluding the air, the bottle acted like a huge cupping glass to this novel portion of the system. The small size of the mouth of the bottle compressed the veins, while the arteries continued to pour their blood into the glans, prepuce, etc. From this cause, and the rarefied air in the bottle, the parts swelled and puffed up to an enormous size.

How much potassium was in the bottle at the time is not known, but it is probable that but a few grains were left, and those broken off from some of the larger globules, and so small as to have escaped the man's observation. I was anxious to test the matter (though not with the same *instruments* which the patient had done), and for that purpose took a few small particles of potassium, mixed with about a teaspoonful of naphtha, and placed them in a pint bottle. Then I introduced some urine with a dash, while the end of one of my fingers was inserted into the mouth of the bottle, but not so tightly as to completely close it, and the result was a loud explosion like a percussion cap, and the finger was drawn forcibly into the bottle, and held there strongly—thus verifying, in some degree, this highly interesting philosophical experiment which so frightened my friend and patient.

The novelty of this accident is my apology for spending so many words in reporting it, while its ludicrous character will, perhaps, excite a smile; but it was anything but a joke at the time to the poor sufferer, who imagined in his fright that if his penis was not already ruined, breaking the bottle to liberate it would endanger its integrity by the broken spicula cutting or lacerating the parts.

CASE VIII. *Mortification of the penis, strangulated by a key-ring; death.* Ranking's Abstract, 1845.

J. A., a Prussian sailor, apparently of a phlegmatic temperament, was brought to the Royal Hospital, on the 22d of April, where he gave the following statement: Eight days previously he had fallen upon a handspike, receiving a severe contusion in the region of the pubes. The pain thereby from the penis to the umbilicus was very intense. Considerable swell-

ing of the abdomen and penis, with discoloration of the latter, supervened, with thirst, bitter taste in the mouth, and restlessness. The bowels had been well opened the night before, some blood had, however, passed, together with the fecal matter. He believed that he had passed no urine lately. Much debilitated by his sufferings, and of a dull and stupid nature, his explanation was exceedingly unsatisfactory. Upon investigation, the skin of the erect and much swollen penis was found to be black and hard, in a state of sphacelus. On the glans, several ulcers, painful to the touch, were seen. The skin around the root of the penis was also hardened and discolored. On the lower part of the abdomen, a hard, somewhat elastic tumor, reaching from the symphysis pubis to the navel, was observed. Pain only produced by a considerable pressure upon the abdomen. Pulse small, 75. Tongue yellowish. Thirst and want of sleep. By means of the catheter, about two quarts of urine, deeply tinged with blood, were evacuated. No difficulty in passing the instrument was experienced. The tumor, after the evacuation of the bladder, was immediately lessened; the pain diminished, and the patient soon fell into a deep sleep. Twenty leeches applied to the region of the bladder, with warm fomentations.

April 23. In removing the necrotised skin and areolar tissue, a deep suppurating wound upon the inferior surface of the penis, anteriorly to the scrotum, was laid bare. In this a hard body, subsequently discovered to be a ring of metal, was found completely surrounding the root of the penis. With some difficulty this ring was removed by means of a fine elastic saw, and, as it was one of that description usually employed to string keys upon, in which the extremities are not united together, the affair was soon over. At one spot the ring was deeply lacerated, in all probability by the patient himself, during his endeavors to get rid of it. Through a perforation in the bulbous portion of the urethra, flowed urine, mixed with blood and some matter. Rather more than a pint of urine was drawn off by the catheter. Patient low and depressed. Pulse small and quick. R.—Ammon. carb. gr. v; opii puri gr. j; sacchari albi gr. xv.—M. ft. pulv., 4 horis.

24th. Patient had enjoyed no sleep. Continued fever. Pulse 96, rather full. Considerable tension of the belly. No urine having been voided, an elastic catheter was passed, through which two quarts of urine, slightly mixed with blood and pus, were extracted. Some pain was caused in introducing the instrument through the pars prostatica, although it passed easily. Excepting the small quantity of bloody pus above mentioned, the urine was clear, and without any abnormal odor. The pains in the penis less severe, and the glans presented a clean suppurating wound. Another portion of the necrotised skin and areolar tissue removed. The patient being costive, a solution of Epsom salts was administered.

26th. Fever increased; tongue parched and dry; great thirst; urine had been evacuated twice a day, by means of the catheter. Ordered, Mist. acid. mineral., a tablespoonful every second hour.

27th. The remainder of the hardened skin removed. Pains in the penis slight. Urine continued to be passed through the catheter. General condition about the same.

28th. Clean suppurating wound. No sleep during the last night. A considerable quantity of urine with bloody pus had flowed through the wound in the urethra. Pulse 120, small. Scrotum excoriated by the urine. Ordered, Ceratum simplex, and emollient poultices.

29th. Great thirst. Diarrhœa of greenish color. Pulse 130, small. Ordered wine.

30th, evening. Diarrhœa had ceased. Oppression in the cardia, hiccough,

debility, pain near the anus. Pulse 140, irregular. R.—Acid. hydrochl. diluti ʒiiss; aquæ puræ ʒvj; syrupi diacodii ʒvj; d. ʒj, every hour.

August 1. Vomiting; diarrhœa, in which a lumbricus passed; restlessness; hiccough. Low and irregular pulse. Wound in the penis dry, yet covered with granulations of a healthy appearance.

2d. Night passed in much pain and distress; hiccough; vomiting of a stinking fluid. Great debility; collapsed countenance; old extremities; meteorismus. Granulations had assumed a bluish color. Pulse 150, very irregular. Consciousness remained to the last. A pint of thick, reddish, stinking urine, mixed with matter, was drawn off through the catheter. Shortly before two P. M. he died, taking with him to the grave, the secret whether he himself or another had placed the ring where found. Although often questioned concerning this, he continued firm to his first statement, viz., that he knew nothing about the ring.

Section cadaveris, twenty hours after death:—

1. In the urethra, a large ulcer, about four and a half inches from the orifice.

2. In the abdomen, much urine, mixed with matter. The fundus and a considerable portion of the corpus vesicæ were in close adherence to the parts around, with great alteration of structure, and consistence almost gangrenous. On the cervix vesicæ were two small openings, with rounded margins. Several small holes in the fundus seemed rather produced in the attempts to separate the bladder from the other parts, to which it had become so closely attached. On the external coat of the intestines was seen a considerable exudation of plastic lymph, in some places almost amounting to pseudo-membranous consistency. A little matter was also seen, but in no place amounting to a larger depot. The ileum, on the side opposed to the insertion of the mesentery, was slightly injected. Other organs in the abdomen and chest in a healthy condition.

CASE IX. *Voluntary division of the penis; escape of a small twig into the bladder; formation of a calculus. Lithotomy.*

This is the case made famous by the late M. Richerand, Professor in the School of Medicine in Paris. It is that of a shepherd, named Gabriel Galien, who at sixteen years of age became addicted to masturbation, which he carried to a greater extent than ever recorded. After twenty-six years' practice of that disgusting habit, he found he could no longer excite a seminal emission by ordinary means, when he resorted to a small wooden rod, about six inches in length, which he introduced into the urethra to effect this object. The nature of his calling facilitated devotion to his ruling passion, which he again indulged, by exciting the interior of his urethra for hours daily during sixteen more years. This canal now became hard, callous, and insensible, and the poor shepherd, soon to become a patient, was the most miserable of men. Having an insurmountable aversion to women, and a constant priapism which nothing could subdue, in a state of despair he seized a common pocket-knife and incised the glans penis in the direction of the urethra. This operation, which would have produced such acute pain in any one else, procured for Galien an agreeable sensation, followed by an ejaculation. Ravished by this discovery, he determined to make up for lost time, and gave way to the fullest indulgence and wildest excess of self-pollution. The hemorrhage resulting from the incisions he would arrest by a pack-thread, which he removed at the end of three or four hours; he learnt, too, to prevent much bleeding by keeping in the median line between the corpora cavernosa. Arrived at last at the os pubis, behold our most extraordinary masturbator once more in de-

spar, when the wooden twig is again called into requisition for relief. Perfectly indifferent about the division of his penis, each half of which entered into erection, he amused himself in this way for the next ten years of his life, when, unfortunately, on the 12th of June, 1774, in one of his movements, he let the short wooden stick slip into his bladder, and this soon terminated his eccentric course of life. A calculeous mass accumulated around the rod, and its presence produced intense suffering. Twice in two months he sought relief in the hospital of Narbonne, ashamed to reveal the cause, when on the third application M. Sernin detected the source, and induced Galien to make confession of this history.

On the 6th of October of the same year, lithotomy was performed successfully, in the presence of a great number of persons, who had been attracted by the singularity of the case, and the twig removed with one end incrustated with a calculeous deposit. On the fifth day the wound cicatrized, notwithstanding, gangrene appeared on the buttock, sacral region, and left thigh. Irregular chills supervened, the lungs became affected, diarrhœa ensued, and the patient died three months after having been relieved by lithotomy.

An examination presented all the viscera, except the lungs and pleura of the right side, which were in a state of suppuration, in a good condition. The genital organs were preserved by M. Sernin, and a design of them sent to the late Prof. Chopart, of Paris, from whose work on the Urinary Passages we have translated the above account.

CASE X. *Cancerous tumor successfully removed from the penis of a bull.* Veterinarian—Lancet, 1843, vol. xlv.

Malignant degenerescence would seem to be a less serious affair in the lower animals than in the human subject. A bull, of the Durham breed, at Leicester, was the subject of a cancerous tumor at the summit of the penis, which it was determined to remove. The formidable undertaking was accordingly entered upon on the 3d of last month. The glans was exposed, and a tumor, four inches and a half in circumference and weighing an ounce and a half, dissected off, besides a smaller tumor about three inches distant, and several other scirrhus knobs. The hemorrhage was small, and promptly put an end to by actual cautery. In making sections of the large tumor, all the characteristics of cancer were seen—"the surface presenting a fungous excrescence, of a red color, with ragged and ulcerated edges. A day or two after the operation a dose of physic was given; since that time he has served a cow(!) and the case has done well."

SECTION IV.

AFFECTIONS OF THE URETHRA.

CASE I. *A bull's penis introduced by the patient into the urethra—then a leaden bougie through the bladder into the peritoneum; death.* Communicated by Dr. Pond, of Granville, Vermont, to Prof. Parker, of New York City. New York Journal of Medicine, 1852.

Peter Williams, fifty years of age, of a vigorous, healthy constitution, intemperate habits, by occupation a tanner and currier, has been in the habit for several years of practising masturbation. He has a wife and several children, but has had no intercourse with them for the last five years: he is very illiterate, half-civilized, and leads for the most part a solitary life. In the practice of his disgusting habit, he has been accustomed to amuse himself by distending the bladder with air blown through a tube, and then allowing it

to escape, and irritating the genitals by various means; in this manner he has removed the hair from the pubes, and the adjacent parts have the appearance of unnatural treatment. Three years since, he obtained the penis of a bull; and after many painful attempts and with commendable perseverance, he succeeded in introducing a portion of it into the urethra; finding its removal rather difficult, he divided it at the meatus urinarius, and endeavored to force the portion introduced further forwards. In this painful predicament he applied to Dr. Pond for advice, who removed the offending substance with a pair of long forceps. Some time after this adventure, he prepared for himself a bougie of lead, ten inches in length, three-fourths of an inch in diameter, and weighing seventeen ounces. While practising with this instrument, it slipped from his fingers and passed beyond his reach along the urethra. For several days he went about in this condition, suffering from the irritation which this unaccommodating instrument produced, but unwilling to seek medical assistance. At length, however, he was compelled, by the severity of his sufferings to yield, and he again applied to the doctor for relief, giving a simple explanation of his situation and the circumstances leading to it. Upon examination with the sound, the foreign body was easily detected, as also felt upon introducing the finger into the rectum. It was resolved to remove the lead on the following day, by an operation above the pubes. After consulting his physician, however, he went to the tavern, drank very freely, became quite humorsoe, and then rode home in a lumber-wagon. His sufferings returned with the return of soberness, and early on the following day, in a paroxysm of dysuria, the bladder ruptured, and its contents, both urine and lead, passed into the cavity of the peritoneum. He satisfied himself of this fact by blowing through a tube introduced into the urethra, as formerly, when he could feel the air pass through the rent in the bladder into the abdomen. The proposed operation was performed, but for the purpose of removing the instrument from the cavity of the abdomen instead of the bladder. The piece of lead above described was found in the cavity of the peritoneum, entirely without the bladder, having escaped through a rent in the posterior part of that organ. The only further note of this case is, that for nine days he seemed in a fair way to recover; but at this time becoming unmanageable the wound was broken open, and he died on the fifth day after, fourteen days from the occurrence of the accident. The most important practical points in the case are thus noticed; as to what was done with the fluid in the abdomen; how the rent in the bladder was managed; what course of after treatment was pursued with so much success; the symptoms and their progress to the fatal termination; and, finally, the post-mortem appearances. As it stands, however, it is another novel instance of the singular instruments which inveterate onanists sometimes resort to, to accomplish titillation. The rupture was, probably, rather a puncture of the bladder, resulting from the constrained position of this metallic bougie.

CASE II. *A twig of the fir-tree in the urethra; removal.* Lancet, 1852.

In a late number of this journal (vol. i. p. 196, 1851), a case was reported in the *Mirror*, where Mr. Birkett, of Guy's Hospital, removed a pen-holder from the urethra of a young man who had himself introduced it. A somewhat analogous instance was lately mentioned by M. Baché, before the Surgical Society of Paris. A man, seventy years of age, took a fancy to pass into his urethra a twig of fir-tree, with short, bristly, closely adherent leaves. The twig used to be introduced with the attachment of the leaves looking posteriorly, so that it glided easily enough, and the slight resistance offered by the leaves when the branch was being withdrawn seemed to suit the old man's

depraved taste. One day, however, the twig broke within the urethra. On examination, the anterior extremity of the fragment was found corresponding to the bulb. As the canal was found to be sufficiently dilated to admit a polypus forceps, M. Baché introduced the instrument as far as the locking of the branches, and succeeded in drawing out the twig. Strange to say, no unpleasant symptom occurred. The twig is preserved in spirits; it is covered with all its leaves, and is four inches long.

CASE III. *A hair-pin in the urethra; removal.* Lancet, 1834.

John Baines, ætat. 44, admitted on the 3d. At a short distance anterior to the scrotum, and in the course of the urethra, there is felt a hard yielding tumor, about the size of a filbert. On passing a gum catheter along the urethra, a grating sensation is communicated to the hand, as if a rough foreign body was lodged in the urethra. The man is, or pretends to be, deaf, and therefore but a very confused history of his case can be obtained from him. He says, that the swelling has existed four years, and that it appeared soon after he was paid off from his ship, on which occasion, and in conformity with custom, he got dead drunk. He experiences now a very frequent desire to make water, with great pain and heat in the urethra, especially when the trunk of the body is bent forwards, and occasionally there is great pain in the region of the neck of the bladder.

An incision being made over the tumor, it was found to be caused by the sharp extremities of a common hair-pin projecting on each side of the urethra, and imbedded in lymph. On pressing these backwards, a prominence could be plainly perceived lower down in the perineum, over which an incision was therefore made, and the round extremity of the pin was exposed, which was easily withdrawn in the direction downwards and backwards with a pair of forceps.

4th. A considerable quantity of urine has been voided from the anterior wound in the urethra, but none from the posterior wound in the perineum.

29th. Both wounds have nearly healed; the urine all passes through the natural passage. Five days after, he was discharged cured.

CASE IV. *Extraction of a hair-pin from the urethra.* Journal de Médecine de Bordeaux. Lancet, 1850.

A young man, twenty-three years of age, had introduced a hair-pin into his urethra, beginning by the bend of the pin. The extremities of the branches were only about an inch from the meatus, and M. Soulé endeavored to pull the foreign body through that opening, but in vain. He then had recourse to M. Boinet's method, which is applied in the following manner: The penis is strongly bent upwards, and the points of the pin are thus made to transfix the inferior parietes of the urethra; the two branches of the pin are then separated transversely; one of them is cut off, and the other comes out with facility. The operation lasted only a few minutes, and the patient got off with two punctures in his penis; the latter was wrapped with cold compresses, and two days afterwards he left the hospital, with no other lesion than two ecchymosed spots corresponding to the perforations caused by the operation.

CASE V. *Extraction of a gold pin from the urethra.* By Dr. Boinet. Gazette Médicale de Paris. Braithwaite's Retrospect, 1841.

I was called some time since, to visit a young man, who for the purpose of excitement, had introduced a gold pin into the urethra, into which it suddenly slipped from his grasp and disappeared. It was more than two inches long,

and the head which had been pushed in first was as large as a hemp-seed. In his attempt to push it out again he had made it go further towards the bladder, and when I came to him, the head of the pin was in at the membranous part of the urethra. I could easily put it in the perineal region, and applying my thumb on the head to prevent its going on towards the bladder, I tried to push it out of the canal, pressing in the direction opposite to that by which it had entered, and at the same time pulling the penis, to prevent the point from catching in the folds of the mucous membrane. But, in spite of all my precautions, my attempts appeared to make it go towards the bladder, especially whenever I tried to disengage the point from the mucous membrane into which it kept running. I had scarcely any instruments with me, nor indeed would any ordinary ones have been of any use; therefore my endeavors to draw it out were unavailing.

I now determined to run the point of the pin through the wall of the urethra, and then to turn the pin end for end, and push the head towards the external orifice. This I accomplished in the following manner: With the left thumb I firmly fixed the head of the pin, and then bending the penis double at the part where the point of the pin lay, I made the latter pass through the wall of the urethra, and drew out all but the head, which now lay where the point had just previously been. This done, I carried the shaft of the pin backwards, and so made the head move forwards, and then pushing on the shaft from behind forwards, I pushed the pin head first towards the external meatus, through which I now easily drew it out with a pair of dressing forceps. In a word to perforate the urethra from within outwards, to turn the pin, to push it on, and to extract it—such were the manœuvres of this operation.

The consequences of this perforation were of the simplest kind; the patient scarcely ever felt a pricking in making water. Three days after he was perfectly well. Subsequently, however, in consequence of a severe and maltreated gonorrhœa, an abscess formed around the urethra, and was followed by a fistulous opening; but it was remarkable that this opening was situated at a considerable distance from the part at which the urethra had been punctured.

CASE VI. *Extraction of a needle from the urethra by a new method.* By Dr. Raynaud, of Montauban. *Annuaire de Méd. et de Chir. Pratique—Ranking, 1847.*

A child eight years old, introduced a needle, head foremost, into the urethra, which was followed by acute pains in the perineum and anus. A finger in the rectum felt the head of the needle through the substance of the prostate gland. It was movable, and compression at the same time across the perineum and on the head of the needle, according to Dieffenbach's plan, failed to promote its passage.

An assistant having previously introduced a finger into the rectum, so as to compress the bladder, to prevent the needle passing into that organ, I introduced a silver catheter as large as the meatus would permit. The catheter passed easily, and met the foreign body in the membranous portion, continuing into the prostatic portion, which presented no great obstacle to its introduction, but the canal contracted upon it violently. With a finger first introduced into the anus, and then passed along the perineum, strong compression was made on the catheter, so as in a manner to embrace the walls of the urethra and to assist the contraction. I drew the catheter back by degrees, and very slowly; it was, in fact, pushed forwards by the contraction of the canal. The needle followed the catheter, and, on the removal of the latter,

was observed in the fossa navicularis, whence it was easily extracted with forceps.

CASE VII. *Excision of the entire female urethra.* British and Foreign Med.-Chir. Review, 1853.

This operation, which, as far as Professor Riberi is aware, is unique, was performed upon a lady in her fifty-eighth year, who, from her girlhood, had suffered more or less from a tumor of the orifice of the meatus urinarius. Of late years it had caused great suffering, and had given rise to frequent retention of urine, for the relief of which the catheter could only be introduced with great difficulty. Worn out with suffering, she sought for its extirpation. The urethra was found projecting from between the labia, and so enlarged in size that the index finger could hardly be introduced into the vagina. The vaginal surface of the urethra was found hypertrophied, and from the lower and inner border sprang a large, hard, fleshy excrescence. The pain was excessive, and the urine passed with great difficulty. The clitoris and nymphæ were implicated in the disease.

It was determined to remove the whole of the diseased parts; and the patient being placed on her knees and elbows, the tumor was isolated on the right and left by two incisions; and on account of the great flow of blood and the contortions of the patient, all the rest of the operation was guided by the sense of touch alone. The tumor having a much greater lateral direction than was anticipated, the operation proved long and painful. The period of the operation in which the tumor, isolated on all sides, remained only in connection with the neck of the bladder, was a very critical one, for the patient was already enfeebled by the hemorrhage, which yet continued profuse, notwithstanding the injection of iced water. After dividing the urethra, the operator was lucky enough to be able at once to insert a catheter through the portion that remained, and then to arrest the hemorrhage by plugging; but in any similar case he would recommend that a female catheter having a groove on its exterior, should be introduced into the urethra before this is divided. A straight knife is then to be passed along the groove, so as to open the urethra as far as the disease extends, where it may be cut off upon the catheter. The excision in this way would be made more easily, the catheter is in the bladder to insure the escape of urine, and the vagina can be completely plugged to arrest hemorrhage. The portion of the urethra excised measured thirteen lines—that is, it was the entire canal, as this in women measures from twelve to fourteen lines. It was much hypertrophied, and in part degenerated into scirrho-lardaceous tissue. On the twelfth day the catheter and plugging were removed, to the great relief of local irritation. On passing in the finger, a kind of triangular valve, having a thin apex and thick base, was felt hanging within the vagina, and interposing itself as a partition between the cervix uteri and the aperture of the bladder. This proceeded from a prolongation of the natural uterine vaginal fold; and as the process of cicatrization went on it became drawn upwards into the natural seat of the urethra, and there remained adherent, so as to form, so to say, a *new urethra*, placed scarcely more than two or three lines behind the place of the normal canal. By the projection forwards and adherence of this valve, the neck of the bladder and adjacent segments, at first free and movable within the pelvis, re-acquired their normal fixity to the arch of the pubes. The urine came away involuntarily for twenty days, after which the power of retaining it was gradually and completely acquired.

The disease reappeared in the locality of the operation, and in the inguinal (which were somewhat enlarged prior to the operation) and ilio-lumbar glands; and the patient died amidst dreadful suffering two years afterwards.

SECTION V.

AFFECTIONS OF THE FEMALE EXTERNAL ORGANS OF GENERATION.

CASE I. *Obstinate adhesion of the labia.* Lancet, 1833, vol. xxv.

Mary Lonnard, ætat. 18, lately admitted, under the care of Mr. Callaway. It appears that she has had an agglutination of the labia from childhood, there being only a very small opening in that neighborhood, which seems to be a very vexatious circumstance to the young lady. The aperture has always admitted the free escape of the urine. Eight years since she said that she was under Sir Astley Cooper, who divided the parts effectually, though not so permanently as might have been expected, for a cicatrix formed, and she therefore (four years ago), again had it divided, and on that occasion by Mr. Gossett. There is at present an opening, which permits of the escape of the catamenia and urine, and which, indeed, Mr. Callaway thought "sufficient for all useful purposes;" but in order to satisfy the girl's apprehensions, the cicatrix was to be again divided. How came the cicatrices, under good subsequent treatment, to have formed? We were of too delicate a frame of mind to question the damsel on the subject, though the inquiry was one of interest; and probably the performance of one of the great social ordinances of life will be resorted to, to prevent the third recurrence of the malformation.

CASE II. *Excision of the external labia pudendi for sarcoma.* By Simeon Bullen, Esq., Surgeon, of London. Lancet, 1840, vol. xxxviii.

Mrs. —, the wife of a respectable farmer, about fifty years of age, applied to me in May, 1837, stating that, for a period of nearly three years, she had been affected with swelling of the labia pudendi, which had been gradually increasing; that she had not obtained any benefit from the medical practitioners whom she had consulted, and that the swelling had latterly become very painful. Her health had become generally weakened, and she was in great anxiety and distress of mind, despairing of recovery. On examining the parts, I found each external labium pudendi considerably enlarged in every dimension, and occupied by a tumor apparently such as that classified by Mr. Abernethy as vascular sarcoma. There was not any chance of cure in this case, except by extirpating the parts, and I advised her to have the operation performed, to which she assented. On removing the left labium, the discharge of blood was so rapid and profuse, and the vessels so numerous, that before I could succeed in securing them, fainting had taken place, and the effect on the system was so alarming, that I was obliged to postpone for many days the operation for removing the other, which was attended with similar loss of blood. The surface of the incision was covered with dressing of ceratum eetaei, the wound cicatrized in a few days, she soon recovered her health, and has never had any return of the disease. The substance of each tumor was composed of adipose and fleshy tissue, numerously supplied with bloodvessels.

CASE III. *Death from rupture of the clitoris.* By Thomas Gutteridge, Esq., M.R.C.S., of Birmingham, England. Lancet, 1846.

Catherine K—, aged thirty-eight, the mother of several children, the youngest five months old, has been addicted to drinking to excess occasionally, since the death by burning, of two of her children, six years ago.

On the 13th instant, having been in a state of intoxication for three days, in the course of which she had, as on previous occasions, been furious with

anger, and very abusive in her language towards her husband, he, provoked beyond endurance, kicked her underneath, as she was in a stooping posture. Blood flowed profusely from the private parts.

She was kept raised up by her attendants, until she was visited by myself and a medical friend, about three-quarters of an hour after the injury had been inflicted. She had then lost from three to four pounds of blood, and was extremely faint. She was forthwith laid on the bed, and notwithstanding brandy was given, in a few minutes she expired.

Examination, thirty-eight hours after death, showed the cavities of the heart, and the veins of the chest and belly devoid of blood. The membranes of the brain were highly vascular, and there were several spots of extravasated blood on the left hemisphere. The right lung was adherent, in part, to the costal pleura, and the liver attached to the diaphragm, from former inflammation. There was no sign of injury or disease within the pelvis; the uterus was small, and its internal surface covered with mucus. Not the slightest sign existed of hemorrhage from that part; nor was there any clot in the vagina. The rectum was healthy. There were no hemorrhoids. On inspecting the vulva, a wound was seen just within the vagina, on the left side, extending from the pubis along the ramus of that bone, to the extent of an inch; in depth, it was about three-quarters of an inch. The pubis and left ischium being removed, with the soft parts attached, the pudic artery was carefully traced to its ultimate divisions, but neither a fine probe, nor inflation, nor yet injection of fluid, discovered any rupture of that vessel opening into the wound. The left crus clitoridis was crushed throughout its length, so as to exhibit its cavernous structure. From that tissue alone, then, could the fatal rush of blood have proceeded.

The case was the subject of a coroner's inquest. Circumstances showed the absence of intention to inflict any very grievous bodily harm. The verdict given was, "Homicide by misadventure."

CASE IV. *Enormous enlargement of the clitoris cured by excision.* *Lancet*, 1852.

Sarah G—, aged fifty-three years, unmarried, a robust and florid-looking countrywoman, was admitted, November 1, 1852, under the care of Mr. Shaw. The patient has generally worked in the fields, and about farm-houses, always enjoying excellent health. Up to the last twelve months she had an abundant supply of wholesome food, but since that time, being unable to work, she often had very poor fare. The catamenia first appeared at sixteen, and have continued regularly to within the last year, when they began to become scanty; and, finally, eight months before admission, they ceased entirely. About sixteen years before coming to the hospital, the patient noticed a small lump, about the size of a horse-bean, in the upper portion of the vulva; this tumor, from her description, seems to have been an enlargement of the prepuce of the clitoris. During the first year the growth increased to the size of a walnut, and became very sensitive; it gradually enlarged, took a very rapid development during the last two years, and has now reached the size of a strong man's arm. The hypertrophied clitoris has always been pendulous, and gave the patient pain when she tied it up to get rid of the inconvenience. The urine has always been passed freely.

On examination, an enormous mass was seen hanging from the pubes, and completely concealing the vulva; the pedicle measured about four inches in diameter—the lowest portion more than eight, and the whole length was at least twelve inches. The extremity presented a bifid shape, showing that the whole mass was a continuous hypertrophy of the prepuce of the clitoris. The

inferior half was studded with a great number of wart-like tumors, varying from the size of a pea to that of a filbert; the mass felt hard and resisting, and pressure gave the patient no pain. The labia majora and nymphæ had been gradually effaced by the enormous preputial enlargement, and when the pendulous tumor was raised, the vulva was seen of very small size and flattened, being usually covered and hidden by the tumor.

The patient was placed, on Nov. 5, 1852, in the position for lithotomy, and after she had been narcotized with chloroform, Mr. Shaw proceeded to remove the unsightly mass by rapidly dividing the pedicle transversely just below the mons veneris. The hemorrhage, as anticipated, was considerable, but by carefully compressing the wound and rapidly tying the vessels, the quantity of blood lost was comparatively small. The patient was some time before she recovered from the combined effects of the chloroform and the operation, but she finally revived, and has since done extremely well.

Mr. Shaw stated, in some remarks which he made after the operation, that the mass was a great deal larger when the patient was first seen than had now been observed. By the upright posture the enlarged clitoris was in a constant state of congestion and œdema, both of which diminished considerably after she had remained in bed for a few days. Mr. Shaw considered this a mere hypertrophy of texture, the tumor coming very near those usually looked upon as fibrous growths. Mr. Shaw recollected that last year he had removed tumors of the same kind, which had sprung from the nipples of a female patient; this latter case had done very well, and he had the best hopes of the present one, though it could not be concealed that hemorrhage might occur when the woman became warm in bed, from vessels which had now retracted. The patient has had no unfavorable symptoms, and the work of cicatrization is already beginning.

CASE V. *Enormous enlargement of clitoris cured by excision.* By Mr. Henry Thompson.

This was presented to the London Pathological Society by Mr. Henry Thompson, and was removed from a woman, aged 46, who was admitted into St. Marylebone Infirmary, with enlargement of the external organs of generation. The tumor was firm and lobulated; when she was standing, it reached to within two inches of the knees, measuring nine inches and a half from its pedicle to its lower margin; its circumference at the pedicle was about fifteen inches, and twenty-nine inches and a half round its base. It was not endowed with much sensation, but caused pain by its weight. The tumor was first observed about nine years ago, but within the last three or four years its growth has been more rapid, causing greater pain. The patient has suffered from vaginal discharges for some years, probably gonorrhœal, which was the only cause to which the origin of the tumor could be traced. The tumor was removed by the knife, the precaution having first been taken to carry several stout ligatures through its base, to prevent hemorrhage, a proceeding which proved very successful and necessary. When the tumor was removed, and after drawing off some fluid from it, its weight was 3lbs. 13½. The external appearances are peculiar. The surface is nodulated, formed of closely-packed protuberances, the size of a pea, and nearly uniform. On examination, under the microscope, the internal structure was apparently an hypertrophy of the areolar tissue, containing a small proportion of fat in its interstices.

CASE VI. *Fatal hemorrhage from the labium, caused by the kick of a brutal husband.* British and Foreign Med.-Chir. Review.

Cases are not unfrequently brought before the courts of justice in this coun-

try, in which a fatal hemorrhage has resulted from the female external organs being wounded by cutting instruments; but such hemorrhage has less commonly occurred from a contused wound. Indeed, this instance can hardly be called one; for although the wound resulted from a kick with the boot of a brutal husband, yet this was armed externally with enormous projecting nails. The woman, previously in good health, walked a short distance after receiving the injury, bleeding all the way, and was dead before assistance arrived. The body was found quite pale and exsanguinous, the heart and large vessels being quite empty, and no effusion into any internal organ discernible. A large lacerated wound in the labium was discerned, the finger passing freely to the horizontal ramus of the pubis in one direction, and towards the cavity of the pelvis externally to the vagina, in another.

CASE VII. *Absence of the vulva; pregnancy and natural delivery.* By Prof. F. Rossi, of Italy. *Lancet*, 1828, vol. xiii.

A woman felt very violent pains in her abdomen, which were attributed to simple colic, on account, as we shall presently show, of the complete absence of the vulva, which rendered the existence of uterine pains, announcing an approaching delivery, improbable, although she was married. Professor Rossi, having attentively examined the patient, found that she had no trace of the external organs of generation: the pubes were completely void of hair, as in girls not arrived at puberty. This unusual arrangement leading him to think that these pains might be the result of the retention of the menstrual discharges, the existence of pregnancy appearing impossible, M. Rossi examined the rectum and decided on making an incision about three fingers' breadth in length, in the natural direction of the vulva and vagina. M. Rossi was greatly astonished on finding, by means of his finger, which was introduced into the depth of the incision, the sac containing the waters passing across the opening of the neck of the uterus, and which shortly after gave way. The head of a foetus was observed, which the power of nature only was sufficient to expel, with its appendages; it was of the male sex, and lived six hours.

An inflammation of the womb took place after the delivery, which quickly decreased, and an abscess in the neighborhood of the parts was obliged to be divided to admit of the passage of the feces. The milk fever ran its accustomed course, and was not more violent than usual. The aperture made in the direction of the vagina was kept open by means of a tube, which was distended with air after its introduction, so that this artificial canal served to admit the penis; this is, in fact, what happened; for the same woman was delivered a second time, by this new passage, two years after.

As it was impossible that conception could take place without sexual intercourse, questions were repeatedly put to the husband, and the opening in the rectum was attentively examined; they discovered within the anus a narrow orifice, capable of admitting a very small sound, and which communicated with the artificial canal which was made by the bistoury; this was, no doubt, the passage in which conception had taken place.

SECTION VI.

AFFECTIONS OF THE VAGINA.

CASE I. *Removal of a pessary after forty-one years' sojourn in the vagina.* By F. T. Huxthal, M. D., of Massillon, Ohio. *Ohio Med. and Surg. Journal*, 1852.

Mrs. Lederman, German, aged seventy-three, was attacked December 17th, 1851, with a violent cough, and pain in the right side, with high febrile action.

Auscultation revealed pneumonitis of mild character. These symptoms promptly yielded in a few days, and convalescence was established. On the second day of the attack, whilst coughing violently she felt some pain, in the pelvic region, which partially gave way to topical applications. After she commenced to move about her room, the pelvic pain returned, and gradually augmented until the sufferings compelled her to return to her bed, and I was again summoned to see her; from the history she gave me I was apprehensive of finding a hernial protrusion of the right ovary into the vagina. An exceedingly fetid discharge had appeared the day before, and at this time the irritation communicated to the neck of the bladder was so great as to produce incontinence of urine, which added much to her misery, excoriating the external genitals, and rendering life a burden. Consent to a vaginal examination being readily granted, I introduced the index finger into the vagina; its progress was interrupted by the presence of a rough circular body, which appeared to rest upon the perineum, and rise up behind the symphysis pubis. Finding I could make no impression upon it with the finger, without inflicting great agony upon the patient, I desisted, and represented to her that there was a foreign body there, of some kind, which would have to be removed before she could by any possibility recover. Upon interrogating her as to whether she had ever introduced any substance into this canal, she gave me the following account: In 1811, after confinement, she had prolapsus uteri, and upon consulting a midwife (in Germany), she introduced a ring, which she said was made of wood, covered over with beeswax—(*cera flava*.) She stated that she had never extracted it since it was first placed there, nor has she ever felt the least inconvenience from its presence until now.

I plainly stated to her that recovery from her truly distressing condition would be impossible without the removal of this substance. To the operation for its removal she readily consented, and on the following day I took Dr. Wm. Bowen with me, and after a tedious and unpleasant operation, succeeded in removing a pessary of $3\frac{3}{8}$ inches in its long diameter, and $2\frac{1}{8}$ inches in its transverse diameter.

The pessary was a circular ring of dense wood, over which originally a layer of 1-16 of an inch of beeswax had been placed, making the thickness of the ring nearly $\frac{3}{4}$ of an inch. It now presented the appearance of a roughened stone, in some parts over an inch thick—the deposit having much the appearance of stone in which the phosphate of lime predominates. The difficulty in the operation consisted in the contracted state of the os externum, which was not over $1\frac{1}{4}$ inch in diameter, and defied all effort at dilatation. The perineum was dense and unyielding, and reminded me strongly of the ligamentum nuchæ. After a vain effort with a blunt-hook, introduced into the eye of the pessary, we determined to cut it into pieces, which was accomplished with a pair of scissors about three inches long in the blades, and the whole removed in four parts.

We directed the vagina to be well washed out with soap and lukewarm water for a few days. The recovery was speedy and complete.

CASE II. *A glass pessary broken in the vagina.* Boston Med. and Surgical Journal, 1849.

On inquiry, I found that the pessary had broken; that while standing at the window, doing nothing, she heard a noise, and that any effort since had caused pain. On examination, I found it broken indeed, into a great number of pieces; parts of the periphery were *in situ*, and all the parts were at the upper part of the vagina. I found I had an unenviable task before me—the extraction of these sharp, angular and pointed pieces of glass from the vagina.

I had some doubt as to the feasibility of the operation, and some apprehension for the result. After two hours, and a half of most diligent and most careful manipulations, I succeeded in extracting every vestige of the glass. The number of pieces extracted were fifty, of all shapes and angles.

CASE III. *A bone netting-mesh in the vagina.* Removed by Dr. Lever and Mr. Hilton, of Guy's Hospital. *Lancet*, 1848.

E. P—, aged thirty-four, tall and delicate, was admitted into the hospital Dec. 31, 1847. On the 6th of June, previous, whilst in the act of applying some ointment with a bone netting-mesh to the vagina, she was disturbed, and sitting down suddenly, forced the mesh through the vagina, out of sight, and subsequently beyond reach of the finger. From that period she experienced severe pain in the right side of the pelvis and leg of the same side, the extremity feeling frequently numbed and cold: the pain was aggravated by any sudden movement. When admitted, she was much exhausted by continued suffering; the right lower limb was wasted; the pain took the course of the great sciatic nerve, and micturition was painful and difficult. On examination per vaginam, a resisting substance could be felt lying obliquely within the pelvis to the right of the vagina, and stretching, apparently, from the right ischiatic tuberosity to the sacro-iliac synchondrosis of the same side. The general health of the patient was attended to, and improved under the employment of tonic treatment, with local anodynes. When examined by Mr. Hilton, the foreign body was found to occupy the position noticed above, and could be felt through the vagina, rectum, or bladder, being to the right of these viscera. On the 24th of January, the operation for its removal was performed by Mr. Hilton, who cut down upon the body through the vagina, and after a fruitless attempt to remove it entire, passed a noose around it so as to include severally the upper and lower portions of the mesh. These were then separately removed with a pair of dressing forceps, having been previously divided with a pair of bone forceps. The upper portion measured four inches; the lower, one inch and five-eighths in length; the breadth and thickness of the object were severally one-quarter and one-eighth of an inch. The operation was followed by considerable constitutional disturbance, and some local inflammation of the serous and areolar tissues, requiring the free exhibition of opium, mercury, and other appropriate remedies. She, however, rallied subsequently, and left the hospital quite well on February 22d.

CASE IV. *An ale-glass in the vagina.* *Lancet*, 1850.

M. Janssens, of Ostend, had some time ago occasion to withdraw an ale-glass from the vagina of a woman, thirty-three years of age, and separated from her husband. She said that she sat upon it by mistake, but her tale was not believed. The glass measured two inches and a half in diameter and about three in height. The extraction, which was difficult, was effected by the obstetric forceps.

CASE V. *A tumbler in the vagina of a young woman.* *Chelius's Surgery* by South, vol. iii.

A tumbler in an entire state was introduced into the vagina of an unmarried female, about twenty years of age. On her attempting to withdraw it, its upper edge was broken, by which the bladder was wounded, and incontinence of urine produced. In this situation it remained for nearly two years, when it was removed by Mr. Anthony White, who, finding the tumbler to be closely embraced by the vagina, and quite immovable, broke away the sides of the glass with instruments having notches filed at their extremities,

like the wards of a key, until he was enabled to introduce a lever behind it. A large horizontal slit was found in the bladder immediately above its cervix.

CASE VI. *One hundred and eighteen splinters removed from the vagina after more than fifteen years' retention near the vagina, bladder, and rectum.* By D. R. Jones, M. D., of Holmes' Hole, Massachusetts. American Journal Med. Sciences, 1856.

Mrs. I. W. was married in 1838, at the age of 18 years. Her previous health, though not robust, was generally good, and so continued until Dec., 1839. In Nov., 1839, she was confined with her first child. Labor of moderate severity; recovery favorable. Four weeks after her confinement, while stepping from a chair to the foot of the bed, the chair tipped and she fell astride a small pine-wood clothes-frame, breaking it into many pieces, and severely wounding herself, although the extent of the injury was not then suspected. She fainted from the effects of this accident, and immediately had profuse hemorrhage from the vagina. Her physician was called in the morning, but made no vaginal examination; she was confined to her bed for the three following weeks on account of hemorrhage and consequent weakness, pain and soreness in the hypogastric and iliac regions, dysuria, pain in defecation, and feverishness. What appeared to be a piece of lacerated flesh presented itself through the vulva for several weeks—gradually disappearing—though again being forced through, upon the least exertion, during the entire winter.

The hemorrhage lasted for several weeks; there was next a purulent discharge, which has continued until quite recently. A few weeks after the accident, an abscess was formed to the right of the median line, just above the pubes; the swollen surface was very painful and tender, causing much distress during micturition and defecation; after six weeks a partial discharge took place through the vagina, with relief to the symptoms. The swelling remained and pus collected and was discharged once in from two weeks to two months, until May, 1849.

During this period, though suffering much from local pain and soreness, purulent discharges from the vagina, pain in defecation, and during coition, she was able to attend to much of her household duties, and bore three children.

In May, 1849, being five months advanced in her fifth pregnancy, she strained herself while lifting a bed, and felt a sensation as of something breaking in her right side, in the locality of the swelling, causing severe pain, so that she fainted, with the feeling, as she expressed it, "as though all her insides were coming out of her;" there was also slight flowing. She was obliged to keep the bed from that time till the spring of 1855, a period of about six years. She was confined in the month of August, 1849, giving birth to her fifth child: none of her children are living, having died from various causes, and from two months to five years of age. There has been nothing remarkable in any of her labors, though she has suffered much after them from pain and local soreness.

About three weeks after her last confinement she was attacked with dysentery, which was then epidemic in that vicinity, and was very seriously ill.

She came under my care Sept. 27th, 1849, while still very feeble and suffering from the dysentery, though slowly gaining. After watching the case a few weeks, from the nature of her pains and symptoms I was convinced that there was local disease in or about the uterus, which aggravated the dysenteric disease. Upon examination with the speculum, the os uteri was found

enlarged, exquisitely tender, not ulcerated, but the fossa between the posterior lip of the os and the rectum presented an inflamed, ulcerated appearance, but was so hidden by the os that it could not be satisfactorily explored. Under these circumstances I made a free application of a strong solution of nitrate of silver to the os uteri, and as fully as could be done, to the diseased portion posterior to it. The effect was an immediate cessation of the dysenteric symptoms—more full and marked than I had dared to hope—and much relief was obtained from the uterine pains. Similar applications, and of more powerful caustics, to the more diseased portions, have been since repeatedly made, until last spring (that of 1855). From the occasional application of the stronger caustics to the diseased part, she has experienced great relief. During the six years that I have attended her, she has had abscesses form apparently in the areolar tissue between the uterus and the rectum, beyond the reach of specula or any satisfactory examination either by the vagina or rectum, and consequently not attainable by surgical interference—but burrowing in the areolar tissue, and opening, at various points, into the vagina, the rectum, and the urethra, causing urinary fistulæ. From September, 1851, to May, 1853, she was unable to pass her urine, and owing to the excessive tenderness of the meatus, was unable, herself, to pass the catheter: consequently, although she kept a catheter as long as possible in the bladder, at least a daily visit was necessary. The various sinuses of the vagina were laid open and healed, and likewise those communicating with the urethra and bladder. In July, 1854, an abscess broke behind the uterus, discharging a splinter; and from that time till August, 1855, eighty pieces have been dislodged and removed; most of them through the vagina at the point mentioned, a few lower down in the vagina, several through the urethra; quite a number (15 or 20) through the rectum. There is reason to fear that other fragments still remain, although from her great improvement of late, I hope but few. The pieces, as may be observed, vary in size from that of an ordinary lead pencil, and one and one-fourth inch in length, to quite a small sliver.

Since March, 1855, she has been gradually gaining, so as now to be able to be up and attend to most of her household duties.

She is subject to profuse menorrhagia, owing, I suppose, to the long-continued irritation in the uterus and its vicinity, having established an habitual hyperæmia. These periodical attacks reduce her strength; but she expresses herself as now in better health than she has before enjoyed since 1839, when she met with the accident which caused her long and intense sufferings. She still has much distress during micturition from tenesmus, and there is tenderness of the os uteri *in coitû*.

The peculiar nature of the accident; the length of time during which the foreign bodies remained imbedded; the bearing of several children with such disease in the immediate vicinity of the uterus, if not in its very substance; the great local changes which, during pregnancy and childbirth, must have taken place in the diseased parts, yet without exciting fatal inflammation, or effecting the discharge of the offending substances; the dysentery causing an increased inflammation in the affected region, and which thus reacted upon the rectum and aggravated the dysentery, and was finally cured by the use of caustic; the discharge of the wood, separated into so many pieces; their burrowing in the areolar tissue and escape at different points, are all circumstances of sufficient interest, in my opinion, to make it worthy of report, and I therefore send the specimens to the Society, together with the report of the case.

CASE VII. *Rupture of the vagina, with passage of the fœtus into the abdomen.* By M. Danyau. British and Foreign Med.-Chir. Review, 1852.

This occurred in the person of a little, robust, bow-legged woman, twenty-eight years of age. She had been already pregnant three times, delivery having on the first two occasions been accomplished by perforation, owing to the great contraction of the entrance of the pelvis. On the third occasion, labor was induced at the eighth month, and was followed by peritonitis, iliac abscess, and puerperal mania. On the 18th of June, 1848, arrived at the end of her fourth pregnancy, she came to the hospital with commencing labor pains. The liq. amnii had been discharged nine hours; and under the influence of strong pains it was hoped, that owing to the small size of the child's head, the narrow orifice might be passed. The severity of the pains, however, rendered the woman very restless, and while tossing about she fell off the bed. She resumed her place unaided, and declared she had received no hurt. However, the pains at once ceased, the head could no longer be felt, the abdomen became very tender, and the woman's voice, pulse, and countenance underwent such alterations, as to lead to the conclusion that the child had passed into the cavity of the abdomen.

M. Danyau called on her one hour after, resolved upon attempting turning in preference to the Cæsarean section. On passing in the hand, the uterus was found thrust upwards, a little forwards and to the right, the entire left half of the vagina being separated from it. Owing to the small size of the child, its extraction was performed with more facility than had been anticipated, a perforation at the base of the cranium with Smellie's Scissors sufficing to lessen the head sufficiently. The placenta was easily removed from the abdomen, and no intestine descended through the vaginal aperture. No hemorrhage occurred, but the patient seemed reduced to a state of hopeless exhaustion. She rallied, however, and in fifteen days, though advised to the contrary, she left the hospital. An examination per vaginam, made on the ninth and fifteenth days, furnished little idea of the severe lesion that had occurred, scarcely even any irregularity remaining at the place where the rupture had occurred, and the cervix uteri appearing just as it should do at the end of a fortnight. Soon after going out she was seized with iliac inflammation, requiring antiphlogistic treatment, from which she recovered.

CASE VIII. *Imperforate hymen; operation; death.* By Prof. Langenbeck. Lancet, 1827.

A girl, sixteen years of age, who had never menstruated, complained of a swelling on each side of the abdomen in the region of the ovaries, which never disappeared, but became larger, attended with severe pain in the part, whenever symptoms similar to those of approaching menstruation made their appearance. On examination, I found the fluctuation so distinct, that it might readily have been taken for hydrops ovarii. The abdomen was tender on pressure, particularly in the neighborhood of the swelling. In the vagina there was a thick membrane, by which it was completely closed. On the division of this membrane, a considerable quantity of menstrual blood escaped, after which the fluctuating swellings in the abdomen disappeared. The vagina was enormously distended, and it was now evident that the blood collected in it, had produced the swellings so evident on the sides of the abdomen. The pain in the bowels increased after the operation, and notwithstanding a strict antiphlogistic treatment was adopted, the patient died on the fifth day. On examination after death, several gangrenous spots were observed on the intestines, as well as a considerable quantity of lymph. The vagina appeared like a blown up sac. In this girl, the inflammatory affection was probably caused

by the long suppression of the menstrual blood. The operation was, no doubt, the exciting cause, from which we may conclude, that in cases of suppressed menstruation from the same cause, it ought not to be so long deferred.

CASE IX. *Curious case of imperforate vagina cured by an operation.* By R. Fletcher, Esq., Surgeon, of Gloucester, England. *Lancet*, 1831.

One, especially worthy of notice, is an example of imperforate vagina in a young married woman, which was remarkable for several reasons: 1st, From a cure having been performed by operation, though the whole fossa magna was closed up to the orifice of the uterus; 2dly, From no accumulation of the menstrual fluid having at any period taken place; 3dly, From the extraordinary fact, that the penis of her husband, in his vain attempts at the consummation of his marital privileges, had effected a passage into her bladder by the urethra, which was so enlarged as to admit readily of both Mr. Fletcher's fingers. We may add that a similar fact is recorded by Petit.

The patient in Mr. Fletcher's case was twenty-two years of age, and ill health and distress of mind were betokened by her countenance. At the interview with the surgeon, her attendant at once told the cause of anxiety; and the result proved plainly enough that the same cause produced the ill health. The rarity of the case, and the singular process which formed part of the operation, induces us to extract a large portion of Mr. Fletcher's notes:—

"Externally, the parts had a well-formed and natural appearance, though a urinous odor was very distinguishable. On separating the labia pudendi, and surveying carefully all within them, the orifice of the vagina appeared unusually high up; that is, much nearer the glans clitoridis than it should be. On a more minute inspection, the real condition of the parts was as follows: The fossa magna was entirely walled up, from the inferior commissure to the opening which, at first view, appeared to be the orifice of the vagina, but which, in reality, was the orifice of the urethra, very flabby, and enormously enlarged, and which was then in the act of bedewing with urine the parts below. The wall of substance thus filling up the fossa magna was solid and unyielding, giving no idea of there being a hollow behind it, occupied by a movable substance, as in the more common closures of the orifice when the catamenia are collected in the passage; nor was there any fulness of the lower part of the belly, or pressure upon the bladder or rectum from collected blood, which interfered with the functions of these parts. Nowhere could the probe detect any opening, by which, as in the coherent nymphæ of children, a passage from the neighborhood of the orifice of the urethra could be traced behind the cohesion to the canal. But into this said orifice of the urethra, first the probe, then one and two fingers, passed into the bladder with the greatest facility, the woman evincing no pain or surprise at the rough liberties thus taken with her bladder."

The cause of the extraordinary size of the urinary orifice and canal, we have already intimated. Not the least proof could be ascertained to have existed, that the catamenia had ever collected, or had ever been formed, and it was, therefore, probable that the whole passage was obliterated, into which this fluid must have been poured, if one had existed. Under these circumstances, the unfortunate patient being resolutely disposed to the measure, Mr. Fletcher consented to endeavor to make a road to the uterus.

"The patient was placed and tied in the lithotomy position. The forefinger of the left hand was introduced into the rectum, for examination of that part; but discovering nothing unusual, it remained there as a guide to the after steps of the operation. Choosing a point in the centre of the solid substance which occupied the position of the fossa magna, exactly midway between the

centre of the enlarged mouth of the urethra and the inferior commissure, and at an equal distance from the nymphæ, the point of a double-edged scalpel was introduced to the depth of an inch, and the opening enlarged at the same moment, upwards and downwards, so as to make room for the finger. Nothing followed the puncture besides a few drops of fresh blood; the resistance was equally great to the point of the knife, the whole extent of its action. The forefinger of the operating hand now occupied the hole made by the knife. All was shut and closed around its point, and yet there was a certain feel, of a reticular kind of texture, though much too firm to tear asunder, that gave some hope; the knife was resumed, and the forefinger recalled from the rectum to assist in the dissection. This was carried on to the depth of two inches, keeping the point of the knife in the centre of the supposed passage, between its superior and inferior floors, sometimes pushing the parts out of the way of the knife, as the latter made its slow progress. I felt, however, that I was engaged in very blind work—if Scylla was avoided, there was imminent danger of falling upon Charybdis; if the knife kept clear of the poor woman's bladder, it was in danger of penetrating her rectum; and wishing to avoid this mischief altogether, I bethought myself of a large rectum bougie to be driven with a mallet. The room already made by the knife, admitted a large gum-elastic instrument to be urged forwards to the extent of about two inches and a half. Fairly lodged in the hollow, the heel of the bougie received several severe taps with a hammer, that made the patient start again and again, but by which ground was evidently gained. The operation succeeded well. In about a week, repetitions of this practice of tapping succeeded in reaching and discovering the uterus, which was perfectly formed, and in a healthy condition. The woman returned home, soon after menstruated, and has since been rewarded, for some severity of suffering, with a more peaceful home, and also, as I understand, with the birth of two children."

CASE X. *Complete imperforation of the vagina relieved by an operation.*
By James Kennedy, M. D., of New York. New York Journal of Medicine, 1843, vol. i.

On the sixth of January last, Mr. ——— called upon me, requesting a professional visit to his wife, to whom he had been married a few days previously, but with whom he had been unable to consummate the matrimonial rites. On visiting the lady, I learned from her the following particulars: she was thirty-one years of age—was born in Bath, in the State of Maine, of healthy parents, and until the age of twelve years, enjoyed good health. At this period she began to suffer from headache, pain in the back, loins, and lower part of the abdomen; in a word, from the usual symptoms which attend the commencement of menstruation. These symptoms returned every four or five weeks, continuing perhaps a week, and then gradually subsiding, without being attended by any discharge from the vagina. This state of things held on for two years, various remedial means, such as general and local bloodletting, purgatives, the hip-bath, etc., having been employed; but, strange to say, the vagina itself was not examined, nor was it ever subsequently, up to the time that she came under my care.

At the age of fourteen, these symptoms were somewhat relieved by vicarious discharges of blood from the mouth, nose, and anus; and in this condition, at the age of fifteen, she was married. Her husband—a sailor—was drowned at sea about two months after marriage; but during the short period of their cohabitation, he had never been able to effect an entrance into the vagina. From the time of his death, up to the period of her marriage to her present husband, this state of things continued, but with aggravated

symptoms. Frequently, so severe were her sufferings as to endanger life; the pain in the head and back being beyond all control, and at the same time the abdomen and legs were very much swollen. The menstrual efforts, however, still recurred about every four weeks, being usually, though not always, followed by some vicarious discharge.

On questioning her as to her sexual feelings, she replied that they were strong, and that for her own sake and that of her husband, she was not only willing, but anxious, to submit to any surgical operation that might promise to qualify her for the performance of the duties of wedlock. On examination, I found the external parts well formed and prominent, the mons veneris well covered with hair, and the labia and nymphæ fully developed; but there was not the slightest trace of an os externum. On a plane with the meatus urinaris, there was extended a firm, smooth, elastic, fleshy substance, yielding readily to the pressure of the finger, and conveying the idea of a vacant space behind; but the vagina was entirely impervious, being completely occluded. The breasts were of the usual size, full and rounded; the whole form was well developed; and with the exception of the above mentioned peculiarity there was nothing to indicate any departure of nature from her universal laws.

On the following day, having visited her with my friend, Dr. McComb, it was decided to make an incision from the meatus downwards, and to be guided, in our future proceedings, by circumstances as they might occur. The patient was placed on the edge of a bed in the position as for lithotomy; and the labia being now separated by the thumb and forefinger of the left hand, an incision was made extending about two and a half inches in the direction of the vagina. Considerable hemorrhage followed; and as the novelty of the case seemed to demand time for consultation, we agreed to defer all further action till the next day, and to obtain the advice of some other of our professional brethren.

On the tenth of January, in company with Drs. D. L. Rogers and Edward Spring, I again visited the patient; and on consultation it was deemed advisable to deepen the incision, so far as to enable us to decide, if practicable, upon the existence or non-existence of a uterus; and to make, at the same time, a passage, to be subsequently kept open, that might answer some of the ordinary ends of the natural vagina. The patient being placed in the position as before, Dr. Rogers introduced a speculum within the passage already made, and proceeded carefully, partly with the handle and partly with the blade of a common scalpel, to extend the incision in the direction of the vagina. The parts yielded readily; and on withdrawing the speculum, the finger could be introduced about four inches from the external orifice; but its further progress was arrested by a semi-membranous substance, apparently of firmer texture than that which had already been divided. As it was now deemed inexpedient to extend the incision any deeper, a tent was introduced, and the woman was left for the day.

It should, however, be remarked, that there was a diversity of opinion among us as to the existence of a uterus, as well as among those who subsequently examined her, several inclining to the belief that, by pressing firmly with the point of the finger against the inner portion of the artificial vagina, the os tincæ could be felt. Considerable abdominal irritation followed the operation, but this yielded readily to the usual remedies. On the third day the tent was removed; the passage was found somewhat contracted at its upper portion, about three inches from the os externum; and here, for the space of about half an inch, the vagina had contracted itself upon the tent, so as scarcely to permit the finger to pass through it. Another consultation was

now held as to the propriety of dividing this stricture; and in view of the evidently strong disposition of the part to contract, and being unwilling to subject the patient to the pain of an operation which would probably prove ineffectual, it was determined to trust to continued dilatation in the subsequent treatment of the case.

For the ensuing fortnight, various contrivances were resorted to for the purpose of keeping the passage open, such as tents of cotton, sponge, and gum-elastic tubes; but these were not only difficult of introduction, but very painful in their removal. They proved of service, however, in preventing any great contraction of the walls of the vagina. At this period, Dr. Valentine Mott saw the patient with me, and he divided the stricture and extended the incision about one inch farther in the direction of the vagina; and now there was a free passage of about five inches, which it was necessary to endeavor to maintain. Distrusting the efficiency of the former tents, I introduced a common female syringe of the largest size, lubricated with oil, and retained it by a T bandage, so as to keep up a firm and unyielding, yet equable, pressure throughout the whole of the vagina. This was more easily introduced and withdrawn than any of the contrivances I had previously used. It created but little irritation at first, and this gradually subsided; and at the end of about three weeks, the disposition of the parts to contract ceased, the sides of the vagina lost their granulated feel, became soft and lubricated by a mucous fluid; in a word, the passage assumed the character of a natural vagina. I now withdrew the syringe, believing that the objects of the operation had been accomplished; and in the realization of this hope both husband and wife have ever since rejoiced. Indeed, after a lapse of four months, there is not the least evidence of a supervention of contraction in the vagina.

The vicarious discharges have all ceased; and at each menstrual period since, she has had a sanguineous discharge from the vagina, continuing for three or four days. Her general health is now good, all her former distressing symptoms having disappeared—an exemption from suffering to which she has been a stranger ever since she was twelve years of age; and as regards the requirements of matrimony, save that of impregnation, she is now scarcely less perfect than her sex generally.

CASE XI. Formation of a vagina. By the late Prof. John C. Warren, M. D., of Boston, Massachusetts. *American Journal Med. Sciences*, 1833.

A young woman, twenty-three years of age, well constituted, applied to me, with a natural malformation of the organs of generation. On examining, I found the os externum wanting, and so far as could be judged, there was no vagina. The aperture of the urethra was well formed; the clitoris and nymphæ appeared as usual. The breasts and all the other external parts were natural; but no uterus could be discovered on a careful examination by the rectum, either by Dr. Channing, Dr. Hayward, or myself. The patient had never experienced any unusual enlargement of the abdomen.

Believing it possible that the uterus might exist, although not sufficiently developed to be discoverable by the rectum, I determined to comply with the patient's wish, and attempt the formation of an artificial passage: for this purpose she entered the Massachusetts General Hospital, in January last.

The patient being placed on her back on the edge of a bed, feet each in a chair, I attempted to pass a probe in behind the urethra, but found this impracticable, there being no aperture or excavation. The forefinger of the left hand was introduced into the rectum, and a small probe-pointed bistoury employed to make an aperture in front of the rectum as near as might be in the situation of the fossa navicularis. This was accomplished, but I was disap-

pointed in finding no cavity behind or within this aperture. It was necessary, therefore, to proceed with the same instrument, the convexity being towards the rectum, to dissect from behind forwards. In this way an opening was made sufficient to admit the point of the finger. The dissection being carefully continued in the same manner, a passage was formed about three inches long, and wide enough to admit the finger.

The bleeding was considerable; this was arrested by the introduction of a tent. Subsequently to the operation she had much fever, pain and tension of the abdomen, and suppression of urine. These symptoms gradually disappeared.

The wound was carefully dressed by the introduction of a tent daily. The suppuration was considerable; after it had subsided the tent was removed, and the passage exhibited no disposition to close.

On examination subsequently to the cicatrization of the wound, something like labia of the os uteri were discovered.

After her recovery she had some appearance like the catamenial discharge. She then left the hospital. Four weeks afterwards she was seen by Dr. Hayward; he found the aperture and cavity open, and she had had a sanguineous discharge resembling the catamenia; and he thought he could distinguish something like a uterus.

CASE XII. The vagina injured by the nozzle of a pair of bellows, nearly red-hot, being thrust into it. Lancet, 1854.

In August, 1854, Dr. Winn was requested to see, in consultation with Mr. Bedingfield, a young woman who had been in labor five days. She was in the seventh month of her second pregnancy. He (Dr. Winn) discovered that the labor had been interrupted, not from want of power or room in the pelvis, but in consequence of a very singular membranous band, which had prevented the os uteri from dilating. It was half an inch in width, and stretched immediately across the os uteri. It was only adherent at its extremities, which were attached to the angles formed by the junction of the vagina to the os uteri. Dr. Winn hooked his finger over the band, drew it down and divided it with a bistoury. Immediately after its division, the os uteri began to dilate, and labor speedily terminated. A fortnight after delivery, scarcely a vestige of the membrane could be felt, only a small root of the band could be detected anteriorly. It appeared, on inquiry, that this patient had met with a very unusual accident when eight years of age; whilst standing on a bellows placed on a chair, and attempting to reach something, the chair slipped, and she fell with great force; the nozzle of the bellows, which happened to be barely red-hot, penetrating the vagina to some extent. Tumefaction, with a discharge of blood, lasted for some time, but she was able to leave her bed in a few days. The nozzle of the bellows measured about half an inch in diameter. It was right, Dr. Winn thought, to state that her first pregnancy, which terminated at five months, was not attended with any difficulty.

CASE XIII. Passage of a hay knife into the abdomen through the lacerated vagina. Revue Médicale—Lancet, 1834.

Therese Mattieu is a girl well-made, enjoying, ordinarily, good health, 22 years of age. On the 13th of August, at four o'clock A. M., she had occasion to pass into a granary and mount on a hay-cock from eight to ten feet high; a hay-knife, such as is commonly used for dividing hay, was sunk into the hay-cock by one extremity, as far as the angle of the blade. The broken

handle, which was a little more than three feet in length, passed obliquely downwards within a foot of the ground.

Matters were thus situated when the girl attempted to descend from the hay-cock by gliding on her buttocks along the inclined plane presented by its lateral surface. Unfortunately she happened to be exactly opposite to the part of the cock where the knife was implanted. As she descended, the summit of the blade presented itself to the entrance of the vulva, and was finally carried up, as the girl continued to glide, into the vagina. She was instantly seized with a sensation of horror, which led her to catch hold of the hay on either side, in order to arrest the descent; but this soon gave way, the fall became more rapid, and the instrument was carried along with the body, until at length the handle struck against the ground, and the blade was driven through the vagina into the cavity of the abdomen.

The girl fell upon the ground on her right side. In this position, after having called aloud for assistance, she made several attempts to disengage the instrument, without success. Aid arriving, these efforts were repeated more violently by some of her relations, and a midwife who happened to come in: but the only effect produced was to enlarge the already existing wound. A surgeon now endeavored to extract the blade, but also without success. Things were in this condition when Mons. S. was called upon, an hour and a half after the occurrence of the accident. The patient he found lying on her back, with a long piece of wood projecting between the thighs. When the hand was applied over the hypogastrium, a hard isolated body could be felt, situated near the edge of the pubes, a little to the left; the fingers could with great difficulty be introduced into the vagina on account of the magnitude of the foreign body by which it was already occupied. The fear of increasing the laceration by the introduction of any other body, and the impossibility of transporting the patient to her bed in the present condition, made the reporter of the case anxious to break off the wood as close as possible to the vulva, and he was about this when the arrival of a priest to administer the last religious succor compelled him to desist. The handle of the knife was then reduced to a state of carbon by the action of a hot iron. The patient was transported to bed with considerable difficulty, and M. S. was about to complete the extraction of the instrument when he was again interrupted by a physician in attendance, who desired to have the advice of a distinguished surgeon residing twelve miles off.

Under these circumstances it was necessary to wait, and a warm bath was ordered, in which the patient remained an hour, tolerably tranquil, but at the expiration of this time the countenance began to contract, the eyes got sunken, the lips livid, and the pulse became weak and small. The surgeon arrived at half-past 12 o'clock mid-day, seven hours and a half after the occurrence of the accident. He made several attempts to extract the instrument without success, and then resigned the treatment of the case to the reporter. The efforts which had been made had driven the blade still further into the abdomen. The index finger being passed between the anterior commissure and the handle of the instrument, gave the sensation as if a wooden cylinder was prolonged indefinitely upwards. A similar examination was made by introducing the finger between the perineum and the cylinder as far as possible into the vagina, but it was soon stopped by the arch of the blade. Being perfectly acquainted with the form of the instrument, M. S. supposed that by advancing the finger as far as the pointed angle of the blade, he could obtain some idea of its position; this was accordingly done, and the examination by the finger showed that the point of the angle was lodged on the anterior face of the sacrum, between the vagina and rec-

tum, towards the left side; but it was impossible to ascertain the position of the tip of the blade; the only knowledge to be gained on this point was from the sensation of a hard body felt through the abdominal parietes to the left of the pubes. There was no flow of blood from the vagina, and the finger was only slightly tinged when withdrawn after the examination. The abdomen was not swelled; there was no vomiting, and they concluded from these negative symptoms that the intestines and bladder had escaped injury.

The first idea which struck the operator was to elevate the whole instrument so as to disengage its angle and introduce a gorget for the purpose of incising the soft parts to an extent necessary for its extraction; but his attempts were at first fruitless, and were very fatiguing both to himself and the patient. After having gently elevated the wood with the right hand, he endeavored to enlarge the wound at the bottom of the vagina, near the arch of the knife, with the index finger; this was extremely difficult, and almost impracticable, from the elasticity of the tissues, and he resolved to seek for the point of the angle of the blade in the posterior wall of the vagina, and relieve it by an incision in that part; but in making a last attempt with the finger, he perceived that the angle was nearly disengaged by a slight rotatory movement. As it was already turned to the left side, it was necessary to make it describe the quarter of a circle from below upwards, and to place it immediately behind the arch of the pubes and the bladder. The index finger was now carried into the superior angle of the wound, for the purpose of protecting the bladder from the point of the instrument, while the right hand managed the handle at will. At each rotatory movement thus made, the angle of the blade advanced toward the symphysis pubis, and was at length disengaged from beneath its arch, when the extraction was completed without further difficulty.

Fifteen leeches were immediately applied over the hypogastrium, and as a slight reaction seemed about to set in, the patient was placed in a warm bath, where she remained for three-quarters of an hour. The countenance was now no longer contracted, or indicative of the approach of peritonitis. The urine flowed freely when the catheter was introduced, and a lavement was thrown up and returned without change, leading us to conclude that the intestines were uninjured. It should be remarked that the patient had a stool a few hours before the accident.—Four o'clock P. M.; the face was animated, the eyes humid, the skin warm and moist, the pulse frequent and full; bleeding to twelve ounces; emollient fomentations to the abdomen. The febrile symptoms were diminished by these means. The patient passed a tranquil night, with the exception that her sleep was interrupted by a disagreeable sensation in the urethra, and that she could not urinate without the introduction of the catheter.

2d day. The fever was more violent; twelve leeches to the abdomen; in the evening a warm bath was administered, after which the fever lost much of its intensity, and the urine flowed naturally. A lavement at eight A. M., a second one at five o'clock P. M. The succeeding night was passed tranquilly; no local pain. The strict observance of the horizontal position distressed the patient very much, but all motion was forbidden, as they feared every moment to see the intestines descend through the wound.

3d day. Bled to twelve ounces, although there was no local pain, and the general state was favorable. In the evening the abdomen was slightly tympanitic, and the epigastrium was very sensible to pressure; but the symptoms soon disappeared after the discharge of a quantity of gas; this night was less tranquil than the preceding.

4th day. Pulse frequent and quick without being full; temperature of skin elevated; abdomen supple, and tongue natural: a warm bath at four P. M.; half an hour afterwards the skin was of the natural temperature, and the pulse had fallen to the ordinary standard. At eight P. M. an injection was thrown up and returned odorous and changed in color, the first symptoms of the presence of feces in the intestine.

5th day. The state of the patient was very favorable; but at noon she was seized with an access of intense fever without any local symptoms, which continued all day and a portion of the night; an injection was now thrown up into the vagina and returned limpid; the small quantity of pus which has been discharged since the accident was furnished by the fissure of the perineum.

6th day. A slight elevation of the pulse took place towards ten o'clock, although the abdomen and vagina remained without pain; there was also a little tumefaction in the left iliac region, but no pain upon pressure.

7th day. Patient felt herself remarkably well. No examination of the vagina has as yet been made, for fear of interrupting the process of cicatrization; the wound in the perineum is completely healed, and there is no trace of pus from the vulva.

8th day. The patient was in a state of convalescence, and gradually recovered her appetite, etc.; but rest was enjoined for some days longer, in order that the cicatrix might become perfectly consolidated.

CASES XIV. and XV. *Operation for closing the vagina.* By M. Maisonneuve, of Paris—translated by Dr. Williams, of Cincinnati, Ohio. *Western Med. and Surg. Journal*, 1853.

A woman, aged twenty-three, entered the Hôpital Cochin, on the 12th ult.; in the service of M. Maisonneuve, five months ago, she was confined, and the labor was exceedingly difficult. At the end of five days, I believe, she was delivered of a dead fœtus, by means of the forceps. Severe inflammation and extensive sloughing followed; and she was left with an enormous vesico-vaginal and recto-vaginal fistula. The whole of the urine and feces passed out involuntarily through the vagina, than which no infirmity could be more horrible. The case was not remediable by any of the ordinary operations for vesico-vaginal fistula. Some years ago, M. Vidal de Cassis suggested the idea of obliterating the vagina in cases of incurable fistulæ of this sort. Several attempts at different times were made by cauterization, etc. etc., but without success. It seemed that surgery could not obliterate the vagina; although nature herself, sometimes, does it in spite of the surgeon.

Operation for closing the vagina.—Some three years since M. Maisonneuve attempted it by the following operation: He incised the mucous membrane around the outlet of the vagina, dissected it up with the sub-mucous areolar tissue some $1\frac{1}{2}$ or 2 inches along the vagina—so that he thus had, as it were, a loose sleeve of mucous membrane hanging loosely in this canal. He then attached the sides of the free end of this sleeve with a peculiar suture, pushed it up, as you would invaginate the finger of a glove, and then brought the denuded sides of the outlet of the vagina together by the quilled suture passed deeply through the vulva. The parts united by the first intention. But unfortunately there was no outlet for the urine, the urethra having previously become obliterated. In order to produce an artificial urethra, to terminate in the rectum, so that she might have voluntary control over the discharge of the urine, he made a puncture through the perineum, from within the sphincter ani to the bladder. The patient

died from the effects of this puncture; but *died*, as the patients of French surgeons often do, *cured*!

Encouraged by his success in that instance, he resolved to try it again in this case, and operated, on the 12th inst. After dissecting up the mucous coat as before, he united the outlet of the loose sleeve with a suture so arranged, that when the cul-de-sac thus formed was pushed up into the vagina, its mucous surface, exclusively, presented upwards so as to come in contact with the fecal matters and urine. He then brought the denuded walls of the outlet of the vagina together with the quilled suture—one quill placed antero posteriorly along the base of the labia, leaving the urethra and meatus urinarius free.

May 17. Patient has rested comfortably since the operation; some feces have passed by the rectum. On removing the sutures, the wound partially opened, and the fecal matters passed again in considerable quantities by the vagina. Through a *sonde* introduced into the bladder, the same mixture of urine and fecal matter passed. Hence it appears that the presence of urine in the rectum or feces in the bladder does not produce serious irritation, as this woman felt no inconvenience from it. By means of compresses and the bandage he confined the sides of the vaginal outlet firmly together after removing the sutures, and this treatment is still continued. Whether the operation will succeed fully or not I cannot say. I see nothing in the nature of the case to forbid it; I will give you the result at some future time. It is necessary to state that in this woman the whole of the bas-fond of the bladder had been destroyed by the sloughing, so that the opening between it and the vagina is enormous; likewise at least half of the anterior wall of rectum for 2 or 2½ inches is destroyed. The usual operation for vesico-vaginal fistula, by paring the edges and uniting by sutures, could only be effected by dissecting the bladder loose from the surrounding pelvic walls to a large extent. The contraction of the cicatrix thus formed around the bladder would inevitably tear open again the fistula even if it united favorably in the first place. Besides, the cavity of the bladder is very greatly contracted, being incapable of holding, perhaps, over an ounce or two of urine. To unite the recto-vaginal fistula in the usual way would be to produce an unmanageable stricture of the rectum. Hence no other course was left but to attempt the obliteration of the vagina, or leave the poor woman with the loathsome infirmity of the constant discharge of all the urine and feces by this outlet. If the operation succeeds, the woman will have control over the discharge of these excretions, and that is what she desires above all other considerations. This is a new and simple operation, which may be susceptible of valuable application in such incurable cases.

CASE XVI. *Onanism; death from a cup in the vagina.* L'Union Médicale—Lancet, 1848.

On the 7th of February, 1848, a young girl, aged eighteen years, was brought to the Hôtel Dieu of Orleans. She appeared in the last stage of marasmus, and presented that peculiar idiotic countenance which so soon follows confirmed habits of masturbation. She complained of severe pain in the hypogastrium, and of diarrhœa, yet steadily refused to have the abdomen examined. She was so exhausted that no history of the case could be obtained; the only fact which transpired was, that she had been ill fourteen months. The next day she expired.

The *post-mortem* examination was made forty-eight hours after death, and brought to light facts such as have seldom appeared in the annals of onanism.

The external parts of generation did not exhibit any considerable alteration,

except a rather tumefied state of the clitoris; but on a further examination, a hard, thin, and shining body was found within the vagina, its breadth occupying the whole of the transverse diameter of this canal. On thrusting the nymphæ aside, the margins of a pewter drinking-cup were observed; they were rather flattened, and the mouth of this foreign body looked forwards and downwards. This mouth of the cup was half covered by the perineum, against which it pressed in the manner the head of a fœtus might do in a late stage of labor. It was found impossible to remove this body without the division of the symphysis pubis. The bladder was then opened; it was of very small size, and in a contracted state; the hypertrophied mucous membrane had formed pouches lodging five calculi, two of which measured almost an inch and a half, and the others from a third of an inch to two-thirds, in their greatest diameter. These calculi, composed of lithate of ammonia and phosphate of lime, looked very much like, and had the consistence of, the concretions of gravel, and broke easily between the fingers. In following the canal of the urethra, it was found that the same had been completely divided about two-thirds of an inch above the meatus by the upper border of the cup, which was pressing it against the posterior aspect of the pubes, so that the urine found its way into the vagina (the parietes of which had thus been perforated), by flowing round the exterior of the cup. This explained the presence of a thick layer of calculous concretions, which were found surrounding the cup; they were almost a third of an inch thick at the most dependent part of the foreign body. When the cup was removed, its form and volume were minutely examined; the bottom was provided with a kind of round pedestal, which seemed to have embraced the neck of the uterus as a pessary might do; from the base to the upper rim, it measured a little more than two inches, and the diameters of the orifice (which was flattened), gave in one direction two inches, and in the other an inch and a half; the circumference taken under the concretions was six inches. The mucous membrane of the vagina was extensively sphacelated and infiltrated by oxide of lead; the dilated ureters were of the size of an adult finger, and the atrophied kidneys seemed to have yielded all their substance to minister to the enormous increase of their pelvis.

There can be no doubt that this pewter vessel had remained for fourteen months in this girl's vagina, when her own statements are connected with information derived from her friends. These latter affirmed, that about fourteen months ago she was suddenly seized by violent colic, and that she had ever since been bedridden. If, also, the thick calculous concretions surrounding the cup are taken into consideration, it must be evident that months were necessary to allow of such an accumulation. It is strange, withal, that the large quantity of oxide of lead did not produce any of the usual poisonous effects of this metal upon the system, for no trace of the usual saturnine phenomena were discovered; but it may be supposed that the uric acid combined with the oxide of lead to form a neutral salt, which was daily carried off by the urine, which regularly washed all the parts, and never stagnated.

This girl, who was a servant, had been under the care of several medical men, and had even remained for a whole month in the hospital of the country town she came from; yet she contrived completely to conceal her extraordinary affection, and succeeded in diverting the attention from the real seat of pain by assigning imaginary symptoms, for which she was treated. She continued to suffer in silence until complete exhaustion put a term to her wretched existence.

The pathological preparations and the pewter cup are preserved in the museum of the Medical School of Orleans.

CASE XVII. *Violation of an infant eleven months old; death in thirty hours.* Dublin Med. Press, 1840.

Anne Hall, aged eleven months, was violated by a private soldier, named Andrew Hume. Examined by Mr. Kingsley, surgeon to the Templemore Fever Hospital and Dispensary, two or three days after the commission of the crime; the prisoner was found to have the penis small, and the glans slightly excoriated. "The whole of the external genitals (of the child) were found in a torn state, viz., the perineum very much so, as were also the labia minora, and adjoining mucous membrane of the labia majora and the clitoris; in fact, the whole of the vulva, or genital fissure, presented a large, lacerated wound, in a high state of inflammation; the child was in a state of collapse, and died a few hours after my visit, having survived the injuries inflicted on her only thirty hours." On a *post-mortem* examination, the vagina was found "very much dilated, and longer than natural; its extremity was torn from its attachment to the neck of the womb posteriorly, leaving a large torn opening between the uterus and rectum directly into the cavity of the abdomen, where a quantity of bloody serum was effused."

SECTION VII.

AFFECTIONS OF THE BLADDER.

CASE I. *Retention of urine for nearly seven days in a child; then relieved spontaneously.* By Thomas W. Markham, M. D., of Huntsville, Texas. Memphis Medical Recorder, 1855.

On the 20th of January, 1854, I was called to see Richard Jenkins, aged 6, and of feeble and delicate constitution. About eight hours before I saw the patient, he was seized with a sudden retention of urine. All the ordinary efforts to relieve the bladder having proved inadequate, I was sent for to introduce the catheter. Upon inquiry into the history of the case, I learned that, about two weeks previous to my seeing the patient, a large blister had been applied to his abdomen, and that symptoms of irritation of the urinary organs supervened shortly afterwards, and continued up to the time of his inability to evacuate the contents of his bladder. Anticipating no difficulty in introducing the catheter, and drawing off the urine, I attempted to pass the instrument into the bladder without delay, but I was utterly foiled in my efforts. As soon as the catheter entered the urethra, it was so tightly grasped that it was impossible to introduce it, without the employment of an amount of force sufficient to endanger the occurrence of laceration of the urethra. I was also compelled to desist, in consequence of the exquisite pain that attended the operation. We administered ether by inhalation, which, to some extent, relieved the pain, but did not facilitate the passage of the catheter. The most powerful relaxing agents, among which were the warm bath, tartar emetic, lobelia, tobacco, etc., which were faithfully and perseveringly tried, produced little or no effect upon the system of the patient; certainly none whatever in relieving the distension of the bladder.

Having been foiled in every attempt to evacuate the bladder, and the accumulation of the urine continuing to increase, it was determined, upon consultation with Dr. Rentfro, an intelligent and experienced practitioner of Huntsville, Texas, to puncture the bladder. We informed the father of the child, who was a physician, of our determination, but he refused most positively to allow the operation to be performed. The bladder, by this time, had become enormously distended. The fundus could be distinctly felt above the umbil-

icus. And as it was distended to its utmost limits, I confidently expected rupture of the bladder, and the speedy dissolution of the patient. As I had but little hope that the child could survive without the bladder was tapped, my only resource was to relieve his sufferings, which were indescribable. For this purpose opium was unsparingly exhibited. The little boy was now abandoned to his fate, and I expected every hour to hear of his death. Six days had elapsed since he had discharged one drop of urine, and I considered it impossible that he could live. About this time, however, there was an *extravasation of urine into the areolar tissue of the pubes, and into the scrotum, perineum, and penis*. The scrotum mortified, and one of the testicles was left bare. Ulceration of the dorsum of the penis also occurred, and through the opening thus formed, *the first water was discharged, after a perfect and complete retention for nearly seven days*. The urine passed through this opening for a few days, and then resumed its usual course, *per vias naturales*.

The loss of substance occasioned by ulceration and sloughing has been entirely repaired, and the little fellow continues in excellent health up to this time.

CASE II. *Retention of urine, from an enormous prostate, in a child*. By Charles Hodgkins, M. R. C. S., &c., of Bilston, England. *Lancet*, 1843, vol. xlv.

The parents of W. B., ætat. 7 years, at about the middle of November, 1842, observed that after playing he came into the house very much bent as he walked, and complaining of having "hurt his belly;" but as no external bruise appeared, they did not think proper to apply for aid, and he seemed soon to regain his cheerfulness. He, however, spoke, in a few days, of uneasiness and difficulty in passing his urine, getting up frequently in the night and straining very much before he could make water. This continued for a fortnight, when, the symptoms becoming more urgent, on the 1st of December I was sent for, and found him lying in a bent position on the left side, with his legs drawn close up, and complaining of great pain in the belly, thirst, and other febrile symptoms, with constipation of a fortnight's duration, and passing very little water. Thinking, probably, that the loaded state of the bowels was the source of evil, I merely prescribed a brisk purgative, with fomentations to the belly. On the following day the bowels had acted, but the urine had decreased in quantity. I now ordered another cathartic, and to continue the fomentations.

Dec. 3. A vast quantity of liquid stool, mixed with scybala, had passed; the febrile symptoms less; but the bladder had ceased to act; I therefore introduced the catheter, and drew off three pints of strong-smelling urine.

On the 5th, the retention still continuing, I examined the case more minutely. On introducing the finger into the rectum the coats of the bladder appeared to be very much thickened, but I failed to detect any tumor. The abdomen appeared full and rather tender, but no particular viscus seemed to be the seat of disease.

8th. During the last two days he objected to the introduction of the catheter, as the urine had dribbled away frequently involuntarily, but the distension now being painful, he wished it drawn off, after which this remedy was employed daily. I now supposed that the bladder might be paralyzed from overdistension, and endeavored to pass a gum catheter, and leave it in, but failed, and he decidedly objected to a metallic one remaining.

14th. To-day I again examined per rectum, and found what appeared to be a large tumor occupying the situation of the prostate gland. The general fulness of the abdomen increased; the bowels continued to act regularly. I

prescribed remedies to reduce the tumor, such as hydriodate of potash, etc. (leeches were objected to); nevertheless, the disease continued to increase, and by Jan. 10 the fundus vesicæ appeared level with the umbilicus; the testes were retracted; he began to emaciate, and his appetite became capricious.

Jan. 25. The disease still progresses; he is very much emaciated; the belly very large, and the left leg oedematous. The water drawn off has acquired a strong fecal odor; the bladder appears above the umbilicus, nearly as high as the pit of the stomach, and a hard substance can be felt across the hypogastrium, behind the bladder. This increased so rapidly that a medical friend who saw him with me supposed that there was extensive hepatic enlargement. All the symptoms continued to increase until the 2d of February, when he died.

Autopsy twenty-four hours after death.—On opening the abdomen the bladder was found to occupy a very prominent situation, the neck being seen above the pubes and the fundus in front of the arch of the colon, and as high as the inferior curvature of the stomach. It contained about two pints of urine. Its coats were very much thickened and extremely varicose. There was a black patch, of the size of a half-crown piece, as if gangrene had commenced on the posterior side. The peritoneal cavity contained about a pint of serum of a strong fecal odor. Behind the bladder a large tumor appeared, filling the whole cavity of the pelvis. It was rather firm to the touch, and so completely did it take up the whole cavity of the pelvis, that I had considerable difficulty in inserting a finger between it and the bones, and the circumstance naturally created surprise that the patient was able to pass the feces. On raising it out of the pelvis I found that it was attached to the bladder in front and to the rectum behind. It joined the bladder at about an inch above the entrance of the ureters, occupying the entire space of the trigone to the apex. The shape was precisely that of the prostate. *The length was seven inches, and the breadth four and a half or five inches. It weighed between three and four pounds.* On the posterior surface there was a depression or groove, along which the rectum was attached, which enabled the feces to pass. The ureters, which were distended to the size of a finger, entered it about the middle. On cutting into it the structure of the tumor looked like that of the prostate seen through a magnifying glass, spongy in texture, and easily broken down. Its color was very similar to that of fresh Castile soap. All the other viscera were healthy, but pushed upwards, the liver being quite up in the chest, and the stomach behind the sternum. The head was not examined.

CASE III. *Urine discharged at the umbilicus by ulceration of the bladder.* Lancet, 1831, vol. xix.

At a late meeting of the Medico-Physical Society of Florence, Dr. Betti communicated the case of an elderly man in whom, in consequence of complete obliteration of the urethra, the urine was discharged through the navel; it had been supposed that the urachus was opened; but on *post-mortem* examination it was found that there was an ulceration of the bladder, from the fundus of which, up to the navel, an abscess had formed, and that this cavity had served for the passage of the urine.

Dr. Nespagli mentioned the case of a female, at the post-mortem examination, in whom the upper portion of the bladder was found wanting, and had been supplied by adhesion of part of the colon to the remaining portion of the bladder, so as to complete the cavity. The patient had not suffered either dysuria or incontinentia urinæ.

CASE IV. *Spontaneous rupture of the bladder; operation above the pubes; recovery.* By A. V. Williams, M. D., of New York City. New York Med. Times, 1855.

A man, aged 32, of spare habit, but of great endurance, has for several years labored under stricture of the urethra, with frequent desire to urinate from irritability of the bladder. He states that on several occasions, he has been unable to pass any water for several hours. On the 9th day of June, 1854, I was called to see him, when he stated that he had not passed any urine for two days; that this morning, when making a violent effort to do so, he felt something give way in his belly, and "felt a snap;" since which he has felt no desire to urinate, but the pain is very great over the belly. I endeavored to pass a catheter into the bladder, but found it impossible to do so. He was put in a warm bath, a large anodyne administered, and a warm poultice applied over abdomen.

June 10. He slept some last night, but otherwise remains in the same state, except that the abdomen was not swollen. I could not make any other diagnosis than that some portion of the bladder had given way when he felt the "snap;" and that the effusion of urine into the cavity of the abdomen accounted for the subsidence of the desire to make water, and also caused the other symptoms.

I requested Dr. Willard Parker to meet me, who, on examination, concurred with me as to the nature of the case, and of its desperate character.

On consultation, we agreed that the only chance for the man (and that a very small one) *was to open the abdomen above the pubes, cut into the bladder, and pass a catheter, if we could, from within out through the penis, and re-establish a passage in that way.* To cut into the bladder from the perineum was useless, as the effusion was above the pelvic fascia; and a puncture through the rectum was impracticable, as the bladder was empty and could not be felt. The case was fully stated to the patient, who requested me to "cut away."

After shaving the pubes, I made an incision about four inches long, from the pubes upwards in a line with the linea alba, dividing the fibres of the pyramidalis; then very carefully divided the tendon beneath, and with a director dilated it freely. The urine flowed out abundantly from the wound. There was but little hemorrhage. The bladder was deep, and firmly contracted behind the pubes, and so altered in appearance that it could not be recognized as that organ. I pushed up the peritoneum with one finger, whilst Dr. Parker, with a hook drawing up the bladder, I punctured it with a bistoury; on dilating this opening with the finger, the internal surface was found corrugated and thickened. The opening into the urethra could not be felt, so that the original design of forcing a passage from within outwards could not be done. Whilst my finger was retained in the bladder, Dr. Parker accordingly passed a grooved sound into the penis, down to the strictured part, and forced it forward until the point was felt by my finger through the thickened coats of the bladder, which were so tough I could not tear it with the nail, but cut upon the end of the sound, with a probe-pointed bistoury, carefully passed along the finger. The wound made in the abdomen was brought together by a single suture; a catheter introduced through the false passage made into the bladder, a large anodyne given to the patient, and he placed in bed as soon as the operation was completed; he felt greatly relieved, and soon fell asleep. 11th. The patient says he feels pretty comfortable; he only complains of the general soreness of the belly. The urine flows from the wound, and also from the catheter. 12th. Had a bad night; pulse 130; abdomen tender; urine flows as yesterday; bowels not opened; vomits a green matter; skin hot; but says "he shall get well," which opinion he stuck to throughout. Gave him opium

gr. iij., with calomel gr. viij., and directed a pill of calomel gr. ij. and opium gr. ʒ, to be given every two, three, or four hours, according as he is restless; diet accordingly, with poultice to abdomen. 13th. Passed a more comfortable night; the vomiting has ceased; bowels freely purged; pulse 130; abdomen tender; wound healing above the suture, whilst the urine flows from the lower part above the pubes, and through the catheter; continue the calomel and opium every four hours. The constant dribbling of the urine over the scrotum has produced excoriation, which annoys the patient more than his other troubles. This was relieved by simple cerate, and the parts protected from the urine by an oiled silk bag. 14th. Patient attacked with violent hiccough, from which he suffers dreadfully. This symptom caused great distress, and continued without intermission for an entire week. Nothing seemed to do any good, and all remedies for it were abandoned, except a pill of opium three or four times a day; the calomel was omitted on account of his gums being sore. The symptoms of peritonitis are subsiding. 21st. The subsidence of the hiccough was a great relief. The patient began to show his sufferings. Beef tea and milk punch were ordered, and a general supporting regimen was followed throughout the remainder of the treatment, with quinine.

A slough came out of the wound above the pubes, about the size of a pullet's egg, leaving a clean, granulating sore, which healed kindly. On the 27th day after the operation, the wound had entirely closed, and the urine passed through the penis in a fuller stream than it has done for years. The patient recovered, and engaged in his laboring business as a journeyman butcher.

CASE V. *Rupture of the bladder; opening above the pubes; recovery.* Lancet, 1848.

On the evening of July 5th, Mr. Syme was requested to visit a youth, who having attempted to leap over a railing, had fallen forwards, and violently struck the abdomen against a post. He immediately complained of great pain, and the abdomen became distended. A catheter introduced allowed the passage of about four ounces of bloody urine. There were all the signs of ruptured bladder, with great collapse. Leeches and fomentations were applied, and an opiate prescribed. On the following day the abdominal pains and swelling were increased, with dulness on percussion below the umbilicus, and tympanites above. The next day the abdomen was still further distended, and there was œdema of the posterior parts, from the chest down to the thighs. The catheter was introduced twice, and drew off bloody urine. On the following day the œdema had increased to a great extent, and the breathing was much embarrassed. Below the umbilicus there was now obscure fluctuation, which induced Mr. Syme to make an incision into the linea alba. After cutting through a thick mass of condensed tissue, a stream of fluid passed out, which was distinctly urinous, and considerable relief was experienced. On the next day the pulse had fallen to 100. On the 11th, some fever, which abated by making a freer opening in the abdomen. On the 26th, a slough appeared at the orifice, which being removed proved to be dead areolar tissue, coated with deposit from the urine. Mr. Syme then passed his finger into the wound, and felt a laceration in the position of the bladder, uncovered by peritoneum. On August 5th, the patient passed urine *per vias naturales*, and in another fortnight was well.

CASE VI. *A red-hot poker thrust through the bladder of a young man; recovery.*

This we translate from *Chopart's Maladies des Voies Urinaires*, into

which it was admitted from a collection of cases published by an Edinburgh Society.

In March, 1735, a blacksmith thrust into a young man aged 20, a *red-hot iron*, which entered about an inch and a half from the anus, passed through the pelvis, and came out in the *linea alba* just above the pubes. Mr. Wilson saw the patient some hours afterwards; found his pulse feeble and intermittent; he vomited bilious matter and suffered acute pain in the lower part of the abdomen; he experienced also thirst, insomnia, cold sweats and syncope. Fourteen ounces of blood were taken, and an enema with turpentine administered to rouse the system to reaction. The pain in the abdomen now diminished a little, still he passed a restless night and his unpleasant symptoms persisted. Forty-eight hours after being wounded, he had not voided a drop of urine, notwithstanding the great quantity of drink he had taken, and his pulse was yet hard and bounding. He was again bled to twelve ounces, and emollient fomentations applied to the painful parts. A little urine loaded with mucus was passed for the first time thirty hours after the injury. He took an emulsion with nitre, and a cordial julap which moderated the vomitings. The fomentations, injections and emulsions were continued the third day. Urine and feces passed out at the lower end of the wound, which was injected with a resolvent and honey. This treatment was continued for ten days when the functions of the bladder and rectum were resumed. The patient was sustained on vegetable matter and mild drinks, and he took anodynes at night. In six weeks he was cured; became fat on a milk diet; and remained exempt from an obstinate rheumatism which had previously tormented him.

CASE VII. *Inversion and prolapsus of the bladder through a vesico-vaginal fistula.* By the late Prof. R. L. Howard, M. D., of Columbus, Ohio. Ohio Med. and Surgical Journal, 1852.

As the following case is in many respects unprecedented in the annals of surgery, we propose to give a brief history of it, and call the especial attention of surgeons to its principal features.

Mrs. D. was confined with her first child, about five years ago. The labor, we suppose, must have been a severe one, as the passage of the child through the soft parts lacerated the perineum extensively, while the head pressed so firmly upon the pubes, as to induce sloughing of the vesico-vaginal walls. This resulted in a large fistulous opening, a vesico-vaginal fistula. The recto-vaginal septum was not completely divided, but as there was incontinence of urine, her condition became wretched beyond description. Since this period, she has had two labors, in one of which the forceps were used.

About nine months ago she observed a tumor in the vagina. This gradually increased in size, until it protruded from the vulva. The irritation, inflammation and ulceration in and upon the tumor, produced by contact with, and friction against the thighs and clothing, induced a vast amount of suffering. She was unable to stand erect, to approximate the thighs, or to sit directly upon a chair, but was compelled to stand and walk with the legs widely separated, and sit upon one tuber ischii. She was attended by a number of physicians, but received no relief—indeed, the nature of the tumor was a puzzle which they could not well determine.

About the 20th of May last, we were called to see her. The patient being under the influence of chloroform, we examined the tumor, which hung pendulous from the vagina, about the size of a large orange, and directly found it to be the inverted bladder. Raising the tumor over the pubes and pressing back the soft parts, we could see the jets of urine issuing from the ureters on its posterior surface. We then made an effort to reduce the bladder to its

natural position, by pressure, kneading, etc. etc., but could make no impression upon it, other than to return it into the vagina.

We now proposed, if the patient, who was in very indigent circumstances, could be placed in our little surgical infirmary, to make an energetic effort to relieve her. The benevolent ladies of Columbastook charge of the matter, placed her there, and furnished the means for her support. We placed her in a horizontal position, confined her to a rigidly abstemious regimen, and gave her anodynes, and applied such fomentations and ablutions as tended to relieve irritations, swelling, etc. At the end of two weeks we made another effort to reduce the bladder, similar to the one employed before, but without success. About the 15th of June (we have not a note of the date), we resolved to make a final effort, and proceeded as follows:—

In presence of and with the assistance of Drs. Smith, Carter, Kendrick, Eells, G. and R. M. Denig, and others, we placed the patient upon her back before a window, upon a table, with the thighs fully flexed. Raising the tumor upwards, and pressing the perineum downward, we succeeded in seizing the cervix uteri, with Jobert's long uterine volsellum, made by Charriere, of Paris. We then drew the uterus forcibly downwards towards the coccyx. This manœuvre brought the ring of the fistulous opening perpendicularly before us, like a fenestrum. Confiding the volsellum to Dr. Eells, and the chloroform, which was freely used, to another assistant, we grasped the tumor with the fingers of both hands, and made firm pressure, for the purpose of relieving the congestion; then, by a kneading process, similar to that employed in the taxis in hernia, industriously applied, we succeeded, in the course of fifteen minutes, in returning the bladder, suddenly, to its natural position. Nothing could exceed our gratification at this event. We are confident we never could have succeeded, without the volsellum applied to the uterus.

For the purpose of preventing a return of this calamity, we introduced a gilded ball pessary, six inches in circumference, belonging to Prof. Smith, into the vagina. This succeeded admirably. One week subsequently, the patient was about the house, as comfortable as if nothing had happened. The fistulous opening is gradually contracting, and the parts are losing their intense irritability. By the pressure of the ball against the opening, the urine is retained for an hour or two, and by a sponge, and T bandage, she keeps herself free from the annoyances of constantly dripping urine.

Should the fistulous opening become sufficiently contracted to justify the effort, we intend to make the operation so frequently performed by M. Jobert for the radical cure of vesico-vaginal fistula.

SECTION VIII.

FOREIGN BODIES IN THE BLADDER.

CASES I., II., III., and IV. *Illustrating how foreign bodies occasionally get into the bladder.* By A. B. Shipman, M. D., of Syracuse, New York. Boston Med. and Surg. Journal, 1849.

(1.) The following incident is somewhat interesting, as it illustrates one of these cases. On dissecting a subject a few years ago, in the Indiana Medical College, a calculus was found, one and a fourth inch in length, and three-fourths of an inch in diameter, rough on its outside, but in shape resembling an egg. No satisfactory history of his case was obtained at the time. In performing the operation of lithotomy before the class, on the dead subject, this calculus was employed. In one instance, on removing it with the forceps, I accidentally crushed it, and found the end of a lead-pencil sticking out at one extrem-

ity. It was a little over an inch in length, and made of red cedar, which on cutting still exhaled the peculiar odor of that wood. A small lead was in the centre, and one end of the wood sharpened, the other cut off square. A few days after this, a young medical student brought me the annexed history: Three years and six months previous to the death of a young man, 20 years of age, he being in company with a lad of his own age in the woods, introduced this pencil-point first into the orifice of the urethra, to gratify a morbid appetite, and it slipped away from his fingers beyond his reach. Being much terrified, he kept working at it, but the outward end being squarely cut off, would not come out, but worked backwards into the bladder, when it ceased to trouble him. Twelve months afterwards he began to experience difficulty in urinating; but called on no physician until the lapse of eight months. This physician discovered stone in the bladder, and advised him to have lithotomy performed. But about this time a Uroscopian was consulted, who, after wisely peeping into a vial of his urine, made the discovery of simple liver disease, and under his treatment he died—it being from three to three and a half years from the introduction of the pencil. He never, from first to last, disclosed the accident to his physicians; but the young man who was with him at the time of the occurrence gave the history, as he was the confidant of the patient.

(2.) Foreign bodies will sometimes get into the urethra and bladder in a strange and unaccountable manner, especially into the female urethra. A student of medicine, or rather a man who had practised medicine in the West a number of years, brought me a stone the size and shape of a pigeon's egg, which he declared he had extracted from the urethra of a female. It had lodged in the urethra, an inch from the external orifice, obstructing the urine and causing great distress. He had not the least doubt of its being a calculus, formed in the bladder originally. As soon as I saw it I was convinced that it was formed in some lime-stone quarry originally, and found its way into the urethra from without—the why and the when, best known to the patient. On expressing my opinion to the owner of the pebble, he was disposed to be crabbed, and was for a hot dispute; when, to convince him, I had him view the stone through a microscope, and lo! it was plainly seen to be composed of minute fossil shells—evidence conclusive that it was never formed in the bladder. On a more minute and particular examination, the fact was elicited that the female alluded to was one of those strange, hysterical beings, whose minds are of a perverted cast, and who are always having anomalous and out-of-the-way disorders.

(3.) An illustration of the value of the microscope as a diagnostic means, was had in the case of a female who was subject to catalepsy, somnambulism, hysteria, mesmerism, and a long catalogue of strange and anomalous affections. One of the most tangible of her intangible difficulties, was the passage of large quantities of gravel, sand, and pebbles from the urethra. It was said that *quarts* of these had passed her from time to time; and that no mistake in this matter might arise, the catheter would detect them while in the urethra and bladder. I procured half a gill of these gravel stones, and their physical qualities were precisely like clean water-worn stones, selected from a gravel bank or a brook. Examination of them, chemically, showed them to consist of heterogeneous substances—lime, silicious, and fossiliferous kinds. And the microscope plainly exhibited some of them to contain minute shells and coralline formations. After this, the intelligent reader may guess, at least, *how* the substances got into the bladder. Her physician, who is a gentleman of skill and intelligence, believed them to have been formed in the bladder or kidneys. They were at times detected in her stools; but as she strained

much, and sat over a vessel, her attendants were not certain but that these came also from the urethra. The history of this female would furnish a tissue of as strange and extraordinary circumstances as that of Jane Rider, Rachel Baker, or any other of the like stamp, which are on record; and as I have copious notes, I may some day furnish them entire for publication. These cases are better understood at this day than formerly; yet there are instances where these persons not only deceive others, but themselves likewise—a species of moral insanity, which prompts them to do things totally inconsistent with reason and their own principles. If this female introduces these foreign bodies into her urethra, and at times swallows some of them, it is done in a paroxysm of intellectual or moral perversion, unknown to her in her more lucid intervals.

(4.) A few years ago it was my fortune, or rather misfortune, to have under my care a female patient who labored under this perversion of mind, and she had the most strange and contradictory kinds of diseases, mostly affecting the genito-urinary organs. One day it would be an inability of retaining her urine; the next, perhaps, retention, requiring the catheter. One month, menorrhagia; the next, passing over the time, or scanty in quantity. There would be weeks that nothing would pass the bowels, the most drastic purgatives proving harmless, and apparently digesting like the blandest aliment, when a dose of opium would act promptly as a purgative. Then a diarrhoea for days together, that opium and its preparations would increase, but a dose of castor oil would put a stop to at once. She would vomit for hours, and the blandest food would be rejected; but perhaps cold raw cabbages and vinegar, or pickled beets, would be retained, and digest most perfectly. But she was always showing me some curious substance which came from the bowels, or bladder, or vagina, and quite a pretty collection of unique curiosities might have been gathered from her, had some one who had a taste for such matters taken pains to preserve them. A ball of hair was voided from the bowels; also a substance like amber, some curious seeds which no one could name, pieces of flesh, a tube like the intestine, a liquid possessing the sensible qualities of urine, milk, blood, inky liquids, globules of quicksilver, sand, pieces of brick, etc. All these substances were at some period of her case voided per anum. A catalogue not less numerous or dissimilar came from the bladder. From the skin there came shining scales, which looked to me like bits of mica, and which she saved and exhibited as some unknown metal that she professed to believe had been given her years ago. I had never seen a case like this before—and as she was a very pious, exemplary girl, I took it for granted that she told me the truth.

Along with the other marvels of her case, black urine was often shown me, and she would go more than a week at a time without once voiding a drop, or there being any secreted. This staggered my belief, I must confess, a good deal; but as I knew of no motive for deceiving me, I reluctantly believed it. The skin would exhibit curiously-colored spots occasionally, sometimes colored off very fancifully. Then a blister, as if a hot substance had been applied, or a strong corrosive material. At length the climax of the case arrived. I was called in great haste to see her, and found the urethra obstructed with a hard substance, which sounded, when the catheter was applied to it, like a calculus. She stated that it had been in the bladder a long time, she was confident. But as it happened, I had been obliged to use the catheter, from time to time, previously, and had even used a male silver instrument for the purpose of exploring the bladder but a short time before, and no stone could be detected. Besides this, the stone was a large rough one, and appeared as if it had entered the urethra from its *external* orifice, instead

of from the bladder. As it was only about three-fourths of an inch from the meatus, it was readily extracted with a pair of common forceps, when its true nature was perfectly apparent. It was a piece of common slate stone, and its kindred fellow was the hearthstone of her own room ! Light broke on me at once. I taxed her with imposing upon me, and her only reply was a violent fit of hysteric grief and anger. It is unnecessary, I presume, to inform the reader that most of her strange and unaccountable symptoms vanished from this time ; her health improved, and whatever diseases came upon her after this, were such as could be classified.

CASE V. *An iron ball in the bladder, and its subsequent extraction by lithotomy.* By E. M. Macpherson, Surgeon, British Army. *Lancet*, 1850.

A private in H. M. 24th Regiment was wounded at the battle of Chillianwallah, on the 13th of January, 1849, in the left buttock. Severe pain was immediately felt in the testicle on the same side. The ball could not be found, but the wound healed without difficulty. No blood was ever noticed in the urine. Symptoms of disturbance of the bladder shortly afterwards set in, which not yielding to remedies, the bladder was examined, and a foreign body detected ; and on the 30th of August, the lateral operation, as if for the removal of a calculus, was performed. An iron ball was extracted, which had become incrustated with a thin layer of sandy deposit.

To the above case Mr. Dixon added notices, from various writers, of fifteen operations for the extraction of balls, which had either primarily entered the bladder, or, having lodged in the immediate neighborhood, had made their way into its cavity. Mr. Dixon had been favored, by Mr. Cusack, of Dublin, with a notice of a similar operation performed by him, and another by the late Mr. Colles, neither of which has been published ; in three cases extraction was not attempted, or was unsuccessfully tried, the bullets, forming nuclei of stones, having been found in the bladder after death ; in one case the bullet was small enough to be voided by the urethra. The situation of the external wound, in the cases cited, was very various. The time that elapsed between the infliction of the wound and the removal of the ball, varied from a day or two to ten years. The lateral operation was performed in a majority of cases ; but the high operation had been employed by Baudens, on account of the ball having entered at the bottom of the linea alba, so that by enlarging the recent wound he could reach the cavity of the bladder.

Dr. C. De Morgan related a case which had occurred in the practice of the late Sir C. Bell. A gentleman from Ireland had been wounded by a musket-shot in the hip. After a time all the usual symptoms of a foreign body in the bladder presented themselves. A foreign body was distinctly detected by the sound. The bladder was cut into, but nothing was to be found. A subsequent operation was performed by Mr. Cusack, and a bullet removed. It was supposed that the foreign body had got into the bladder by ulceration, and that in the first operation it had fallen into the cavity which it had originally occupied.

Mr. W. V. Pettigrew had seen the subject of this case lately ; he was quite well.

CASE VI. *A musket-ball in the bladder.* By James W. Robinson, M. D., of Pennsylvania. *Med. Examiner*, 1855.

Nearly eighteen months since there fell under my observation a case of an anomalous character, which I have ever since desired to make public, but from negligence have suffered it to escape my attention until this late day. Hoping, however, that it may possess sufficient interest to warrant

publication even after so great a lapse of time, I transmit to you an imperfect account of the case—imperfect from the fact that it is entirely from memory, having made no written record of the particulars at the time. I was then pursuing the duties of my profession, twenty miles north of this place, on the great thoroughfare leading from Chambersburg to Pittsburg. I was called six miles west on that road, to see a patient who presented the following history:—

He was a man between 30 and 35 years of age, of good physical development, and unquestionably, at one time, of fine constitution. Two years previous to the time he fell under my care, he was engaged in trading, in the State of Texas, whither he had migrated from Cincinnati, his former home. While pursuing his avocation in that State, he received a shot from a musket ball, which entered the depression formed by the glutei muscles, on the outside of the hip, and passing through behind the femur, lodged, he could not tell where. He lay for some weeks from the effects of the wound, without any medical or surgical treatment, and finally recovered sufficiently to return to Cincinnati. There he entered the hospital, where he informed me that he suffered for some time from a vesico-rectal fistula, which was eventually cured by repeated cauterization; also, that either the wadding of the gun, or a portion of his clothing driven before the bullet, had been removed by an operation, from the cavity of the bladder. During all this period, and up to the time at which I met with him, he could only pass his urine with much pain, by aid of a gum catheter which he had learned to insert himself, and carried constantly with him; the urine always being loaded with more or less purulent matter. Life becoming a burden to him in this situation, and his means of subsistence being reduced to an extremity, and not satisfied with what had been done for him in the Cincinnati hospital, he made his way to a similar institution in Pittsburg, at which place nothing more in the way of an operation was attempted, and no prospect of relief afforded him. He entertained some vague notion that an operation might be performed which would relieve his condition, but had no conception of the nature or rationale of it. Hence he conceived the idea, no doubt from the advice of some other person, of endeavoring to seek his way from Pittsburg to the Pennsylvania Hospital at Philadelphia, for the purpose of presenting his case to the surgeons of that institution. With that in view, his last hope of earthly comfort, he started from Pittsburg in his critical state of health, on foot and without money.

Buoyed up with the prospect of relief of his sufferings, he travelled on at a slow pace, in the month of October, the weather cold and his clothing light. On one of the days in the latter part of that month, there came on a heavy storm of snow and rain, lasting throughout the day, and covering the ground to a considerable depth. During the whole of this day he wandered over long and steep hills, drenched with rain and chilled with snow, and halted at night at a tavern, 116 miles east of Pittsburg, sick and exhausted, his day's journey having sown within him the seeds of death. After lying sick for a number of days without any medical treatment or attendance, I was called upon to visit him. I found him in a miserable condition, complaining of intense pain over the left kidney and in the region of the bladder, and passing by means of the catheter, considerable quantities of urine charged with pus, with much suffering during the evacuation of the bladder. He had labored under considerable febrile reaction, which had now assumed a real typhous type. He had for a length of time, that is, in all probability, ever since he received the wound, suffered from chronic inflammation of the bladder, which was forced into a more active

state by his exposure to the inclement weather, while there was superadded evident acute inflammation of the left kidney. His tongue had assumed the dark brown or blackish aspect, so characteristic of his low typhous condition, with all the other symptoms corresponding. In the way of treatment my efforts were directed towards effecting a mercurial impression, both by internal and external use, but without avail. Demulcents and stimulants, ammonia and wine, and finally brandy and the application of powerful sinapisms, and other medicines, and applications which have escaped my memory, and the recollection of which for our present purpose would be of little importance, were also used. He seemed to rally slightly sometimes, but lingering on for near ten days, he sank and died under copious hemorrhage from the bladder and bowels simultaneously. Two hours after death I proceeded to make a *post-mortem* examination, which was, of necessity, very imperfect from the want of assistance, scarcely being able to procure the services of any one to furnish me a sufficiency of light (it being in the night), from the horror people out of the profession pretend to have for such operations. The examination, however, was sufficiently minute to invalidate my diagnosis, and to reveal a very remarkable case. The left kidney I found to be a mass of supuration. The bladder was much indurated, and its coats thickened to an incredible extent. Laying open its walls I found within its cavity a *musket ball* of the largest size, with a *calculus* three or four times the size of the bullet attached to its side. I have both the ball and the calculus in my possession, though they have become detached by violence. The ball weighs more than an ounce, and is the largest I ever saw. The calculus measures more than an inch in every dimension, except one, being a little flattened and of a cylindrical shape.

The singularity of the case is in the fact that a large musket ball, with a portion of clothing, was driven entirely through the fleshy part of the hip, within the cavity of the pelvis, and finding a lodging in the bladder, allowed it to heal over it, and that it remained there for two years, without causing disturbance inconsistent with life. Also, that after the first shock of the injury, he underwent a partial recovery without any treatment. It is also very singular that he came through the hands of a number of surgeons, who failed even to detect the presence of these foreign bodies in the bladder. I regret very much that he did not reach the Pennsylvania Hospital in as good health as he left Pittsburg, then able to make a long journey on foot in bad weather. I am very sure the able surgeons of that veteran institution would not have mistaken his case, but would have unhesitatingly submitted him to the operation of lithotomy, with every prospect of saving his life and restoring his health.

I regret that my recollection and a more minute examination of the case do not enable me to give an account marked with that exactness and clearness of detail which must be a characteristic of every good clinical or post-mortem report.

CASE VII. *A bean extracted from the bladder by the lithotrite.* Lancet, 1853.

M. Maisonneuve, surgeon to the Hôpital Cochin, in Paris, has just removed a large bean from the bladder of a man, 27 years of age, who had wilfully introduced this foreign body into his urethra. The bean, which, on the introduction of the lithotrite, was felt floating on* the urine, was luckily caught, and withdrawn without crushing. The urethra must have been con-

* *In*, is of course intended, as the urine in the bladder never presents a floating or free surface.

siderably stretched by the passage of the lithotrite partially open, and holding a foreign body more than half an inch long. It is, of course, advantageous that the bean should have been extracted whole; but in supposing that the surgeon had crushed it, the fragments would probably have been passed, as well as a portion of the bean, which was evacuated the day after the operation.

CASE VIII. *Removal of three inches of a gum-elastic catheter with Heurteloup's instrument from the bladder.* By J. H. Dillson, M. D., of Pittsburg, Pennsylvania. American Jour. Med. Sciences, 1850.

Mr. Richardson, æt. 54, an old soldier, of temperate habits, about middle height, and nervo-bilous temperament, in using a defective gum catheter, for supposed spasmodic stricture, broke the instrument, and the detached fragment lodged in the bladder. About ten days after the accident I was requested to see him in consultation with my friend Dr. Simpson. He was then unable to take any exercise, either in standing or walking, without suffering much pain and irritability of the bladder. I passed a gum-elastic bougie (the only one at hand), and distinctly felt the foreign body, but was unable to judge in what position it lay. I then suggested the perineal section as the only means of relief. To this he stoutly resisted, stating he feared the result, and that he had a large family dependent upon him. Examination disclosed no stricture of the urethra, but, to me, more evidence of organic disease of the bladder; therefore I determined to resort to some other means for relief before attempting the operation as for stone. May 2, we again visited our patient, and introduced Heurteloup's instrument for crushing stone. I very soon grasped the fragment of catheter, but was unable to withdraw it. Questioning the patient as to his feelings during traction upon the catheter, I supposed it lay directly across the instrument and at right angles with the course of the urethra. I then loosened my hold, and moved the instrument in a direct line with the supposed position of the catheter, and again manipulating, I caught it a second time, and had the satisfaction to withdraw it with perfect ease. Mr. R. had no further difficulty.

CASE IX. *Removal of a leather shoestring from the bladder with lithotripsy instruments; death of the patient.* Lancet, 1843.

A native of Piedmont some time since entered the Hôtel Dieu of Marseilles for stone, with which disease he had suffered for six months. Lithotripsy was determined on; but on grasping the body within the bladder by the forceps, it was found to be quite soft and compressible, and the surgeon determined if possible to draw it entire through the urethra. Much resistance was met with in trying to pass the neck of the bladder, and again, when the body was brought to the meatus urinarius, it became wedged there so closely that the instrument which held it could be neither retracted nor pushed forward. At length, by some violence, a strip of leather, eight inches in length, was drawn out incrustated with calculous deposit. Abundant hæmaturia followed; and the frightened patient acknowledged that about nine months before he had laid one of his boot-laces in the urethra, then gone to sleep, and on awaking could no longer find his boot-lace. Cystitis afterwards came on, and the man died in three days. After death the bladder was found enormously distended, stretching upwards beyond the umbilicus, its coats thickened, its internal surface of a darkened color, and five small calculi in its cavity. The mucous membrane of the urethra was throughout converted into a softened blackish mass, easily scraped off with a scalpel; the prepuce and integument covering the penis were much thickened and infiltrated with fluid.

CASE X. *A bone ear-pick in the male bladder; a case unfit for lithotripsy; death.* Lancet, 1848.

A case was lately mentioned at the Société Médicale du Temple, where a pretty sharp discussion had taken place on the comparative advantages of lithotripsy and lithotomy, which evidently shows how careful operators should be in weighing all the circumstances of the case in the choice of either of these means. A man had been admitted into the Hôpital Beaujon, who was desirous to get rid of an ear-picker, made of bone, which he had introduced into his urethra, and which had found its way into the bladder. Lithotripsy was (unaccountably enough) resolved upon, and one of the fragments of the foreign body, produced by the attempts at crushing, penetrated the membranes of the organ, and produced fatal peritonitis. M. Leroy d'Etiolles, who was present when this case was mentioned, remarked that instruments are specially made for the extraction of foreign bodies in such a situation.

CASE XI. *Extraction of a fragment of a gum-elastic catheter from the male bladder by section of the urethra.* St. Thomas' Hospital, London. Lancet, 1850.

We have to present to our readers a case of a very remarkable description. It shows in a forcible manner the danger of employing imperfect instruments, of using any force whatever in catheterism, and the advantages of the method adopted by Mr. South for the extraction of the foreign body. For the details of the case we are indebted to Mr. Van Hemert, Mr. South's dresser.

J. L. B——, aged 55, a seaman, from Jersey; admitted into Isaac's ward on the 11th of December, under the care of Mr. South; has had a stricture in the urethra for several years, and has been himself in the habit of passing a bougie about once a week. Having met some friends on the 1st of December, he drank freely of beer, which producing irritation and spasm of the stricture, caused partial retention of urine. The next day, being unable to relieve himself in the usual way with the bougie, he applied for assistance to a French surgeon, who attempted to pass an elastic-gum catheter, but did not succeed in getting it past the seat of stricture; on the following day a similar attempt was made, attended with the same results. On the 5th of December, a very small and short silver catheter was used, but the bladder was not entered, and on attempting to withdraw the stylet, the straight portion of the catheter (two-thirds of the whole), came away with it, leaving the remaining third or curved portion in the urethra, where the patient distinctly felt it, and fearing it might slip into the bladder, kept quite still all day.

December 6. Another medical man was consulted, who passed a bougie to ascertain if the portion of catheter was still in the urinary passage; and finding it was there, the patient was advised by his friends to come to this hospital, where he accordingly arrived on the 11th of December, up to which time he has had no bad symptoms, but complains occasionally of a slight pricking pain about the perineum; urine dribbles from him, but when he attempts he can pass it in a small stream; he was forthwith examined by Mr. South and Mr. Dixon, who found a stricture about three inches from the lips of the urethra, through which a No. 6 sound passed with a little difficulty, and entering a rather spacious false passage into the perineum, its point could be freely moved about. Being disentangled from this, however, the instrument passed readily into the bladder, as there was not any second stricture. No foreign body could be felt in the urethra, but with very little searching in the bladder, the convexity of the sound struck the broken catheter, which lay across the bladder, just behind the prostate, and rung upon it very distinctly. However desirable it might have been to attempt the removal of the broken

instrument along the urethra with Weiss's extractor, or any other instrument, the narrowness of the stricture precluded all possibility of success, and was therefore not attempted.

15th. After consulting with his colleagues, Mr. South determined to remove the piece of catheter by an operation, which was conducted in the following manner: The patient having been placed in the same position as for lithotomy, a staff (No. 4) was introduced into the bladder and heard distinctly to strike the piece of catheter, giving at the same time the sensation of striking against its broken end, probably parallel to the long axis of the bladder. An incision was made through the raphé about three inches long, commencing above the bulb, and extending within an inch of the anus; a cut was then made through the lower part of the bulb, and into the membranous portion of the urethra, which was opened vertically to the extent of half an inch, a straight sound was passed, through the wound, along the groove of the staff already introduced, to ascertain whether an instrument could travel readily along it into the bladder, which being determined, the straight sound was withdrawn, and a pair of long, curved forceps, gently pushed along the groove of the staff, and entered the bladder, dilating the prostate. They were then carefully moved about, but the catheter could not be satisfactorily struck, although the back of the bladder was tilted up by the finger introduced into the rectum. The forceps were thereupon withdrawn, and Mr. South introduced his finger into the bladder, which was carefully examined, but the catheter could not be felt, till, as the finger was drawn back into the wound, its tip caught on the broken end of the instrument, which lay close to the left of the staff, and presented into the wound. The finger was removed, and a pair of thin polypus forceps being passed into the wound, the end of the catheter, which had followed the finger into it, was seized and very readily withdrawn endwise. The patient did not lose a great deal of blood, and up to this period, 27th December, has continued to improve; the wound is healing rapidly, and he passes nearly the whole of his urine by the natural passage.

CASE XII. *A calculus and a portion of a gum-elastic bougie removed from the male bladder by lithotriptic instruments.* By M. Ségalas, of Paris. *Lancet*, 1837, vol. xxxiii.

At the last meeting of the Royal Academy of Medicine, Paris, M. Ségalas presented a fragment of a bougie, which he had just extracted from the male bladder. The following are a few details of this interesting case:—

M., 62 years of age, was in the habit of passing into his bladder a bougie of his own invention. This was composed of two portions, one larger than the other; the smaller portion was received into the larger, and the whole formed a kind of conical tube, in which the point of union of the two portions corresponded with the strictured part of the urethra. Things went on well for some time, but at length the smaller portion of the bougie gave way, and remained in the bladder. After a lapse of forty-eight hours, M. Ségalas was called in, and on sounding the bladder, experienced the sensation which is produced by the presence of a calculus.

The patient had never complained of any of the symptoms of stone; however, as the existence of a calculus was evident, M. Ségalas proceeded to break it up, and, after three sittings, the patient passed a quantity of calculous fragments. It now remained to ascertain what had become of the bit of bougie. The surgeon explored the bladder frequently, and with various instruments, but was unable to detect the foreign body. At last he conceived the idea of injecting a quantity of air and water into the bladder; the fragment of bougie immediately rose from the fundus of that organ, in which it had been concealed.

M. Ségalas endeavored to seize it with an instrument invented for the purpose, but failed; he then introduced his percussor, seized the foreign body, crushed it between the blades of the instrument, and finally succeeded in extracting it altogether. The patient was cured.

The fragment of bougie which M. Ségalas exhibited was three inches long, and crusted over with a urinary deposit. The latter was whitish, whereas the fragment of the stone resembled, in color, the oxide of iron. The bougie had been doubled on itself while being extracted.

The above case is well calculated to prove the advantages to be derived from the invention of lithotrixy. An operation of a similar nature has been lately performed by M. Civiale, and with equal success. The fragment of bougie was about two and a half inches in length, but having lain in the bladder for a considerable time, was covered with a thick calcareous crust.

M. Civiale removed a great portion of the crust with his three-branched instrument, and was fortunate enough to seize the extremity of the fragment between its blades. The bougie was then extracted with facility.

CASE XIII. *Removal of a broken metal catheter through the urethra.* By the late Mr. Tyrrell, of London. *Lancet*, 1835, vol. xxix.

Joseph Strangmore, ætat. 40, admitted under Mr. Tyrrell, Jan. 11, 1835. Has had stricture for some years, and passes instruments for himself. This morning, however, on passing the instrument, it met with great resistance in the bulbous part of the urethra, and on using force the catheter (a No. 6) gave way an inch above its curve, where it had been once soldered. He immediately set out from Reigate, twenty-one miles from London, and walked a considerable part of the journey. A sound introduced by Mr. Tyrrell, evidenced the piece of catheter lodged at the fundus of the bladder transversely, its extremities being held with some firmness by that viscus. He dislodged it by passing the end of the sound beyond it, and drew it forwards to behind the prostate gland, where its position was still transverse. The bladder seemed to contain several ounces of urine. The sound was withdrawn, and one of Weiss's instruments for extracting small calculi, which was nearly straight and had a strong spring, was introduced. One extremity of the foreign body was now free, and after several unsuccessful attempts, was seized and cautiously brought into the urethra. With the finger in the rectum to compress the urethra between the foreign body and the bladder, so as to prevent any retrograde movement of the former, the piece of catheter was then drawn out. It measured three inches in length. The examination and operation together occupied about twenty minutes.

Jan. 14. Feels quite well, and has passed his water much more freely than for some years past.

CASE XIV. *A common tobacco-pipe broken in the urethra, pushed into the bladder, and extracted from the uterus.* By T. H. Martin, Surgeon, Yorkshire, England. *Lancet*, 1837, vol. xxxiii.

B—A—, a female of Newcloses, in this neighborhood, having been subject to occasional retention of urine for many years, was attacked with complete retention on the morning of the 19th of June, 1828, for which I used the catheter. My father saw her on the 20th, prescribed a little medicine, and employed the catheter sometimes once, and sometimes twice a day, until the 2d of August; but she being a pauper, and the overseer objecting to the expense of a medical man constantly attending, gave orders to the woman not to send to her medical attendant any more, from which time to the 15th of September she employed a common tobacco-pipe three times a day; but,

unfortunately, being so brittle, she broke it in the urethra, and with the endeavors she made to extract it, pushed it into the bladder, from which time to the 27th April, 1829, it produced no inconvenience, she being provided by the overseer with a silver catheter immediately after the above accident, which she used two and three times a day. On the 27th of April she was attacked with pains which she described as similar to labor pains, but much more severe. My father was again requested to see her on the 28th, and found, on examination per vaginam, the pipe lodged in the cavity of the uterus, with one end protruding through the os uteri, but it was so strongly embraced by that viscus, as to require the aid of a pair of dressing-forceps, to extract it, and so much force as to break the end of the pipe several times. What I consider most remarkable is her never losing a single drop of urine, but what passed through the catheter, which she continued to use three or four times daily, up to the time of her death, which took place on the 30th of November, 1834, after being confined to her bed entirely for three years or better, she having sunk at last from phthisis pulmonalis.

I was able to procure only a partial *examination*. The bladder was thicker than natural, but had not a particle of calcareous matter in it; on its left side, not far from the ureter, was a patch of about the size of a sixpence, which was much softer than any other part of the mucous membrane, and tore upon the slightest touch of the finger. I therefore concluded that to have been the place which had given passage to the pipe into the vagina, from whence it found its way into the uterus by the os uteri; as I should think it quite impossible that it could have passed through the body of the uterus without leaving some signs of a cicatrix, which I was not able to find, although I brought away the uterus and bladder to examine them more leisurely. The pipe is three inches in length, and was three inches round the middle part at the time it was extracted (from calculous matter, which I believe to be the triple-phosphate), but at present measures only two inches and a half; it is in my possession.

—We would suggest, if it is not likely that the pipe in this case was broken off in the uterus and not in the urethra—whether it was ever in the bladder at all.

CASE XV. *Extraction of a box-wood needle-case from the female bladder, by section of the urethra.* Lancet, 1826, vol. x.

Maria Dominica Schiribizzi, native of the village of Saint Domino, near the city of Arezzo, in the habit of working about the land, was put, in the year 1814, to look after some goats, when being left a great deal to herself, she contracted the practice of onanism. Finding that the titillation of her hand was not sufficient to satisfy her passion, or procure the voluptuous sensations she desired, she had recourse to hard bodies, and employed, instead of her fingers, a needle-case. In using this instrument, she found a point of resistance at the orifice of the urethra, against which she rubbed every day to increase her sensual gratifications. This abominable practice every day repeated, produced at last such a dilatation of the mouth of the urethra, that the needle-case escaping one day out of her hand, penetrated into the bladder. Shame, and the dread of her parents knowing it, made her undergo the most dreadful sufferings for near a month, when, being unable to bear them any longer, she confessed her deed, and applied for relief. Various surgeons tried to extract the foreign body, but their attempts were not only useless, but mischievous, because they brought on an intolerable strangury. The dilatation of the urethra produced by her violent masturbations, and augmented by the subsequent attempts of her medical attendant, was not sufficient to allow of any part of the case being laid hold of; and being con-

vinced that any further attempt might be attended with danger, I resolved on performing an operation.

I made two lateral incisions, which comprehended the whole of the urethra, and the neck of the bladder, and these were sufficiently large to allow of a forceps being introduced into the bladder. I then laid hold of the needle-case and extracted it. Several physicians and surgeons of this city were present at the operation. There was but little hemorrhage. The needle-case was made of box-wood, was of a cylindrical shape, and rounded at its extremities; it was four inches in length, and the diameter of the cylinder so much distended by the wet, was one inch and seven lines, and the whole surface was covered with a calculous incrustation. It was also filled with pins and needles of different sizes. The woman rapidly recovered, without any bad symptoms remaining, and it is only a few month ago that I had occasion to see her, when I found that she had become the mother of several children.

CASE XVI. *Extraction of a needle-case, containing six needles, and incrustated with an immense calculus, from the female bladder, by lithotripsy and lithotomy; death from purulent absorption.* Lancet, 1850.

Dr. Dieulafoy, chief surgeon of the hospital of Toulouse, has published in *L'Union Médicale* an extraordinary case of a foreign body in the female bladder. It appears that the patient, a woman of about forty, and unmarried, had introduced a needle-case, three inches long and five lines broad, and containing six needles, into her urethra; and that it had slipped into the bladder, whence she in vain tried to extract it. When she was brought to the chief hospital of Toulouse, it was ascertained by Dr. Dieulafoy that very large calculous incrustations had formed around the foreign body, which thereby had acquired such a size as to fill up the whole organ, the muscular coat of which was firmly contracted on the stone; so much so that the bladder could not retain any fluid. There was great incontinence of urine, agonizing pain, and severe constitutional disturbance. Dr. Dieulafoy first crushed the calculous portion of the foreign body with a lithotrite, in the shape of strong forceps worked by a screw. When this first step was effected, attempts were made to extract the needle-case, but considerable difficulty was experienced, as it was fixed across the bladder, the lateral portions of the bladder grasping the extremities of the case very tightly. The urethra had to be incised upon a grooved staff, and the foreign body was at last taken out in two portions, the top coming first, and the larger part of the case, containing the needles (which luckily did not fall out), afterwards. Though much of the stony concretion had been crushed, and was lying in the bladder in a state of detritus, the case was found strongly incrustated: the bladder was then injected with warm water, a great many fragments washed out, and the patient put to bed in tolerable condition, though she had suffered much both before and during the operation. She died nine days afterwards with evident signs of purulent absorption. The mucous membrane of the bladder was considerably thickened, and of a slate color; the needle-case had pressed so powerfully with its left extremity on the parietes of that viscus, that they were completely perforated on that side by an ulcerative process. The peritoneum stopped, however, the perforation, and prevented effusion. The right extremity of the foreign body had caused ulceration of the mucous membrane only. Pus was found between the coats of the bladder, in various parts of the pelvis, and in the broad ligaments. On the fundus uteri a carcinomatous tumor, of the size of a horse-chestnut, was discovered, and it was stated by the friends, that the patient had introduced the needle-case to diminish the pain she experienced from the cancerous growth, though

the woman herself had told a tale about using the case as a tube for injecting the bladder. It is very probable that neither of these versions is the true one. The remaining viscera presented purulent deposits, and the death was attributed to what the French call "purulent absorption."

CASE XVII. *Extracting several hair-pins and common pins from the female bladder, with the dressing-forceps.* American Journal Med. Sciences, 1855.

Dr. H. J. Bigelow exhibited a number of hair-pins, and of common pins, which he had at different times, during the last few months, extracted from the bladder of a young woman. The patient had been affected with strangury, and had originally endeavored to relieve herself by dilating the urethra with a hair-pin, which, according to her statement, escaped into the bladder. Her attention once turned in this direction, the subsequent introduction of pins and hair-pins seemed to have become a sort of mania with her. Strangury has been in this case singularly obstinate and persistent. Dr. Bigelow described a very simple manoeuvre, by which these foreign bodies were readily extracted, and which was, as far as he knew, undescribed. A pair of common dressing-forceps were lightly introduced, closed, into the bladder. The foreign body being felt, was easily seized and held. By two fingers of the left hand now passed into the vagina, the operator can feel with precision the position of the pin in the forceps, if firmly held, and which, as it probably lies more or less transversely, can be either rotated into the axis of the forceps by relaxing the grasp, or, what is better, urged to one side or the other so as to be held only by one extremity. The forceps being then lightly held and withdrawn, the pin follows. In the case of a common pin, the point, when held short, is apt to catch in the urethra; so that it is better to pass it back into the bladder, turn it crosswise, slide it through the forceps so as to be held only by its head, and then extract it.

CASE XVIII. *A catheter abandoned by the surgeon after it had slipped into the female bladder, and subsequently removed from an abscess in the sacral region.* Cooper's Surgical Dictionary by Reese.

Some years ago, a surgeon, practising in the country, was required to introduce the catheter for a lady laboring under retention of urine. During the operation he was observed to exhibit signs of confusion, and to quit his patient in considerable embarrassment. The same day he abruptly left his home, and was never seen afterwards. The lady passed several years of dreadful suffering, attributed by herself and the professional gentleman on whom the treatment of the case devolved, to aggravation of the original complaint. At length an abscess presented itself in the sacral region, and the surgeon punctured it, when his instrument came in contact with some unusually hard substance imbedded in the centre of the abscess. With a pair of forceps he now extracted, to his utter astonishment, a blackened female catheter. From this period the lady's sufferings all terminated. A similar accident nearly happened in the practice of another gentleman.

CASE XIX. *A tape-worm passing from the bladder.* By Julia Fontanelle, of Paris. Lancet, 1826, vol. iii.-iv.

This case appears to us the more extraordinary, since in all our researches we have not been able to find a similar one. It fell under the notice of Dr. Darbon, celebrated for the various experiments which he made at the Hôtel Dieu and La Charité for the expulsion of tænia. Before him several physicians had recognized the existence of round worms in the kidneys and the

bladder. Geron has published a case of a woman passing three round worms by the urethra. Tulpus makes mention of a worm being passed with the urine, which was round, long, and red as blood. Ambrose Paré says, that Louis Duret voided similar ones after a long illness. Panzani saw a clergyman fifty years of age, who suffered for four years constant pain in that part of the bladder which corresponded to the centre of the sacrum. The different symptoms appeared to announce the presence of stone in the bladder, when there came away with the urine two lumbrici, after which the pain left him. Ducere, Chopart, Dumeril, Stromaier, Moublet, and others, have published similar observations. There is a curious fact recorded, of a stone being formed in the bladder, having a worm for its nucleus. It was thought probable that since lumbrici are sometimes found in the bladder, tæniæ might also exist in it; and the case communicated to the Academy by M. Fontanelle proves it. In this case, several yards of tape-worm passed from the urethra of a gentleman fifty-six years of age; his chief symptom was an insupportable pain at the verge of the anus, which left him after the worm was voided.

CASE XX. *A girl who voided entozootic worms from the bladder.* By T. B. Curling, Esq., Surgeon, London Hospital. *Lancet*, 1839.

The patient is five years of age, and is not suffering, as far as the author could ascertain, from any disease of the bladder or kidneys. She first passed some of the entozoa in question on the 26th of May last, and continues to do so occasionally to the present time, which enabled the author to exhibit some of them alive to the Fellows present, by the aid of a microscope. When first voided they float separately in the urine, but in a short time they coalesce, and coil themselves together in the form of a ball, at the bottom of the vessel. If allowed to remain in the urine they live for two or three days. They are of two sizes, the larger being more numerous than the former. Having discovered, by reference to Rudolphi's "Synopsis," and other works on the subject, that the entozoon in question had not been hitherto described, the author enters into a minute description of its characters, and illustrates his description by magnified representations of the male and female, as seen in the microscope. From this description, those who are conversant with the structure of the entozoa will recognize a true nematoid structure. These worms, however, differ from all the known genera of this class, in possessing several peculiarities of structure, especially a well-marked annulated body, an anal aperture of a labiated form, and a tegument armed throughout with the spines. Referring it, therefore, to the order nematoidea of Rudolphi, he thus describes its characters:—

Genus Dactylius.—Corpus teres elasticum, annulatum et utrinque attenuatum, caput obtusum, os orbiculare, anus trilabiatus.

Dactylius Aculeatus.—Capite obtuso, toto corpore aculeorum serie quadruplici armato, caudâ obtusâ et annulatâ. Habitat in hominis vesicâ urinariâ.

—Dr. Leidy informs us that this description applies to the larvæ of a dip-terous insect probably of the genus *Anthomyia*, instead of to a nematoid worm.

SECTION IX.

URINARY CALCULUS.

On foreign bodies which serve for urinary calculi. By M. Civiale, before the Academy of Sciences in Paris. *Medical Examiner*, vol. i.

An account of the nuclei which occasionally serve for the formation of urinary calculi is a neglected, though curious, point in the history of the latter

productions. M. Civiale has made some researches with the view of clearing up several obscure facts, and has assembled together 166 cases, from an analysis of which it appears that the nucleus of the stone was formed in 32 cases by needles or pins; in 21 by bougies or catheters; in 14 by pieces of wood; in 13 by bullets; in 24 by fragments of bones, pipe stoppers, barometer tubes, or stems of plants; in 14 by the beards of barley or hairs; in 4 by pledgets of lint, and finally by rings, nails, fruit-stones, needle-cases, etc.

The greater part of the above cases present several interesting points, but we must confine our notice to those of recent date.

Pins or needles are the foreign bodies which most frequently serve as nuclei for stone. This probably depends on the facility with which they present themselves to a certain class of depraved individuals, although it is difficult to conceive in what manner females, more especially, can satisfy their passions with such instruments. A few needles, of from five to six inches in length, remained a considerable time in the bladder without having their points covered with calculous matter, and in a few cases only did they penetrate the bladder, vagina, perineum, etc.

The formation of calculi upon bullets, and other foreign bodies of a similar nature, gives rise to several physiological considerations of importance. In many cases these bodies have passed into the bladder through passages which the surgeon would never dare to traverse with the knife, and what is more remarkable, without producing, in many cases, any notable disorder or inconvenience. Thus, for example, pieces of wood from three to seven inches in length, bullets, etc., have remained for years in the bladder without giving rise to the insupportable pain, necessity of frequent micturition, etc., which usually attend the presence of foreign bodies in that viscus.

The introduction of the nucleus is either accidental or intentional. In the former case the foreign body has found its way into the bladder in consequence of a wound, of a fall, of some fistulous communication between the intestine and bladder, or finally through the fault of the surgeon. In the latter case it, generally speaking, has been introduced by the patient himself, sometimes for the purpose of relieving a retention of urine, or pushing back a calculus; sometimes in a fit of momentary derangement; but most frequently in consequence of depraved and lascivious ideas. The effects produced by the foreign bodies in the bladder are extremely various. Sometimes they generate the highest degree of suffering and pain, which terminate rapidly in death; in other cases they seem to be scarcely felt by the organ, or the inconvenience which they occasion is purposely concealed by the sufferer.

In a therapeutical point of view the presence of these foreign bodies in the bladder is a matter of much interest. From the table to which we have already alluded, it would appear that in 12 cases only, of the 166, they were discharged spontaneously either from the bladder or by an artificial passage. This is a curious circumstance, when we consider that in many cases the bodies themselves are small, and of a rounded form. In 64 cases the operation of lithotomy was performed; the difficulty of the operation depending much on the size and shape of the nucleus of the stone. In 26 cases the foreign bodies were extracted through the urethra, without the aid of a cutting instrument. The majority of such facts is recent and connected with lithotrity. M. Civiale has already published six cases in which he has extracted with success two elastic bougies, a bean, a pea, a stem of a plant, and a piece of straw. In his present communication he details two more cases; in one of which he extracted a fragment of a waxen bougie; in another, a portion of a barometer tube about three inches in length.

CASE I. *A slate-pencil the nucleus of a stone in the male bladder; lithotomy; death from pleural abscess, diarrhœa, etc.* By W. H. Van Buren, M. D., Professor of Anatomy in the University of New York. New York Med. Times, 1854.

J. Brinkerhoff, 20 years of age, born in New Jersey, was admitted, July 31, 1853, into 2d Surgical Division (Dr. Van Buren in attendance.) He is a thin, cadaverous-looking young man, of shy manners, and apparently of a very low grade of intelligence. The history of his case is derived mainly from a letter addressed by his attending physician, Dr. Chas. Hasbrouck, of Sehraalenberg, N. J., to Dr. Van Buren, when the patient was committed to his care.

The boy had been complaining in an obscure and unsatisfactory way, for several years past; he was evidently suffering very constantly, and had grown thin; was solitary in his habits, and exceedingly uncommunicative, so that his parents could get no clue to the cause of his complaints, which he attributed in a vague manner to his urinary organs. His sufferings increased, and he had an attack of hæmoptysis; and finally, under the alarm which the latter symptom gave rise to, he confessed that nearly five years before, a lad with whom he was in the habit of playing, pushed a piece of a *slate-pencil*, about an inch and a half long, into the orifice of his urethra, that it slipped beyond his reach and he never saw it again, but shortly afterwards was taken with more frequent desire to urinate than was usual for him, and each effort to pass his water was followed by severe pain and straining. Since that period he had never been free from pain about the bladder, and in passing water; and the consciousness of the foolish cause of his suffering, of which he was no doubt himself the author, made him shy and uncommunicative in regard to it. He confessed also that he had been in the habit of self-abuse, both before the accident detailed above, and also to a much greater degree since; in fact, of late years he seems to have been unable to keep his hands away from his genital organs.

After admission into the Hospital, he was found to have a calculus of considerable size in his bladder, which was readily felt by the sound, and he presented all the usual symptoms of the disease. His bladder was in a very good condition. His general health was good, with the exception of a very slight cough, and slight flatness under the left clavicle. Pulse regular, and appetite good.

On consultation, it was determined to give him the chance of the removal of his calculus; and accordingly on the 6th of August, he was operated upon by Dr. Van Buren, by the lateral method, with the knife. There was no difficulty in withdrawing the calculus, although its dimensions exceeded the average size of urinary calculi.

A section was made of the stone whilst still wet, by M. Luer, and in its centre was found the *slate-pencil* passed into the bladder five years before, thus proving the patient's statement. Its weight (Apoth.) is 3 oz. 5 dr. 11 grs.; length, $2\frac{3}{4}$ in.; breadth, $2\frac{1}{8}$; thickness, $1\frac{1}{8}$.

The bladder was syringed out with tepid water; a bandage passed around the patient's legs; and by the time he was well-recovered from the influence of the ether, which was employed during the operation, he was removed to his bed, and an anodyne administered. No perceptible shock was caused by the operation.

The patient did perfectly well until the eighth day after the operation, when he had an attack of pneumonia in the left lung. This limited itself on the eleventh day, and he did well again for a week; but he continued to have unpleasant symptoms, recurring from time to time on the left side of the chest,

which rendered his recovery exceedingly slow; and, at the end of a month, urine was still passing through the wound, although the latter had contracted down to a mere fistulous tract. He was now also annoyed by a bed-sore over the sacrum, which rendered it necessary to place him upon a water-bed.

Unfortunately, during the fifth week, the patient was attacked by diarrhœa, which soon rendered his situation exceedingly critical. From this time he continued to run down, in spite of our efforts, and finally died on the 16th of September.

On *examination* of the body, the wound through which the stone had been extracted was with difficulty traversed by a slender probe, the bladder and contents of the pelvis being all healthy. The left lung was very much compressed by a very large collection of pus which had accumulated in the middle or posterior mediastinum; there was also a limited abscess in the pleura of the left side. Right side of chest healthy.

CASE II. *A head of wheaten straw the nucleus of a stone in the male bladder; lithotomy.* By Prof. Van Buren, of the University of New York. New York Med. Times, 1854.

About six years ago, I operated upon an aged man, in Bellevue Hospital, by lithotomy, for the extraction of a calculus of large size, which was found to have been formed upon a nucleus which, from its unusual and grotesque character, I suspect to be an unique specimen in the history of urinary calculi. The case was made public at the time in the proceedings of the N. Y. Pathological Society, published in the *N. Y. Journal of Medicine*.

It is a *head of wheaten straw*, complete in its proportions, and with fragments of the urinary salts (triple phosphates) still incrusting upon it. The calculus, which was of a very friable consistence, was crushed by the forceps whilst it was being withdrawn from the bladder. The extremity of the nucleus was evidently folded upon itself; and, thus bent, it is more than two inches in length. From the partial confessions of the patient, I surmise that this strange substance found its way into his bladder in the following manner: He was a pauper, in the habit of sleeping upon a straw bed, and a very old man. As is not unfrequently the habit of old men of this class, he was in the habit of provoking what remained of his capacity for sexual excitement by such odd means as his fancy suggested; and, with this object, no doubt, he one night drew out a straw from his bed-sack, and introduced the end to which the stalk had been attached into his urethra. The beard and husks upon the straw gave him pain in attempting to withdraw it, and he probably dropped asleep without removing it. The motions of his body during sleep forced the straw onwards into the urethra beyond his reach; and ultimately, in consequence of the arrangement of its husks and barbs, it reached his bladder, where, of course, it soon became incrusting with the salts of the urine.

CASE III. *Five horse-beans the nuclei of as many calculi in the male bladder of the same patient; lithotomy; recovery.* Lancet, 1852.

Mr. Haynes Walton exhibited some calculi, containing beans, that were taken from the bladder of a man by the operation of lithotomy, by Dr. R. Mackenzie, of the Royal Infirmary of Edinburgh. David S—, a laborer from the county of Kinross, aged forty-six, admitted under Dr. Mackenzie into the hospital, September 17, 1851, suffering from the usual symptoms of vesical calculus, which had been more or less urgent for six months previously. The lateral operation was performed on the 13th of October, and five stones were removed. The prismatic shape and uniform size of the calculi were remarked at the time as being curious; but the presence of a foreign body as a nucleus was not suspected till some days afterwards, when the stones and their

nuclei having been deprived of their moisture by evaporation, it was accidentally discovered that one of them rattled. The history of the origin of the patient's symptoms was very imperfectly obtained at the time of his admission into the hospital, but on a more strict investigation, after his recovery from the operation, the following account was obtained: About the end of March of the present year, after a carousal with two fellow-laborers, with whom he lodged in a barn attached to his master's farm, a quarrel arose, in which he was knocked down and overpowered by his two companions. From the injuries he received, and his state of intoxication, he was rendered senseless, and while he was in this condition, the following cruel trick was perpetrated on him by his assailants: He was stripped of his clothes, and a quantity of beans (the common field or horse-beans, used for feeding cattle), were thrust into his mouth, and into the rectum, and several were introduced into his urethra. The manner in which these found their way into the bladder is unknown; but it is probable that several were introduced, one after another, into the orifice of the urethra, and then pushed back along the canal by pressure of the fingers on the penis and perineum. On the following morning he was found in a state of insensibility, with his genitals covered with blood. His companions had made off, and have ever since escaped detection. A number of beans were vomited, and passed per anum, on the day following the assault, and during this and the subsequent day he suffered great pain in voiding his urine, which was mixed with blood, and contained several fragments of broken beans. He was confined to bed for several days, but at the end of a week he had nearly recovered from his injuries, and his urinary symptoms had considerably abated in severity. The patient made a speedy recovery, and left the hospital in perfect health on the 27th of November, the wound having been quite healed for ten days previously to his dismissal.

CASES of calculi deposited upon foreign substances introduced into the bladder. By Amasa Trowbridge, M. D., of Oswego, New York. New York Med. Gazette, 1853.

This veteran and highly honorable practitioner of our profession acted a conspicuous part as surgeon to the American Army stationed upon the line of the Lakes during the war of 1812, with Great Britain. He has long enjoyed the reputation of a most successful surgeon.

The particulars of the first case, furnished by Dr. Wait, of Gouverneur, N. Y., are truly interesting. One would have doubted that the bladder could tolerate chloroform so well.

CASE IV. Stick of sealing-wax, two and a half inches in length, pushed into the male bladder; failure of chloroform to dissolve it; lithotomy; recovery. New York Med. Gazette, 1853.

"On the 22d of July, 1852, I was called to visit Hon. A. L. H., of F——, St. Lawrence Co., who had been troubled with a difficulty in urinating for several years, which was increased so that he used various medicines; not getting relief, he resorted to the use of mechanical means for dilatation with a bougie made of *sealing-wax*, without the advice or knowledge of any one. The stick measured $\frac{3}{8}$ of an inch in circumference.

On introducing it, a portion, $2\frac{1}{2}$ inches in length, broke off and was left in the urethra, near the neck of the bladder. He passed an iron wire into the urethra to extract the wax; with this he pushed it into the bladder.

For eighteen hours after, he suffered but little pain, but soon after his sufferings increased. I used solvent medicine injected into the bladder to produce a solution of the wax and its discharge.

I experimented upon a piece of the same stick from which the piece was

broken, by several preparations, viz., one piece put into alcohol, one in chloroform, one in æther, one in olive oil and urine. The last by the special request of the patient; at the same time I wrote Dr. Trowbridge, and gave him the particulars of the case, and asked his opinion as to my depending on the introduction of any instrument for extracting the wax, if the solvents should fail, and his advice for general treatment.

The Doctor wrote me, "that but little reliance could be placed in the use of Civiale's, or other instruments, in the case; for the reasons, if the wax was yet in a solid state, it would be more likely to be seized in its middle than at its extremities, which would render its extraction impossible; and if the wax had lost its solidity, of course it could not be raised or held to be withdrawn, and that he had no confidence in any mode of treatment except that of the operation of lithotomy."

In my experiments I found that the specific gravity of the wax was greater than that of any of the liquids under experiment, except chloroform; when on the surface of this it floated, while it went to the bottom of the others.

In four hours, the pieces of sealing-wax in the alcohol and chloroform were dissolved; in five, that in æther; while at the end of fifteen hours, that in oil and urine was not perceptibly altered. I adopted the chloroform as the solvent to begin with, for the reason assigned.

This was introduced into the bladder through a male catheter by a small syringe. After emptying the bladder of urine, I injected six drachms of chloroform and let it remain about five minutes. The patient realized but little sensation from it. I then let it pass out, and injected one ounce and a half of cold water; this was repeated every four hours, and the chloroform kept in longer each time. After the second injection, wax began to be discharged in a pulpy flocculent state, so that it appeared to be more in quantity than it really was. And so it appeared by drying and aggregating it. Such was the discharge for three days, of the wax, that the patient and myself flattered ourselves that we should succeed with solvents. The longest time the chloroform was retained, was forty-five minutes; the quantity of urine was increased.

On the fourth day the treatment, or some other cause, produced so much irritation that we were obliged to discontinue the chloroform, and inject cold water; gave anodynes and laxatives, and cooling lotions externally. In the course of two days the irritation so lessened, that the patient was quite comfortable; yet in resuming the use of the chloroform, the patient agreed with me that the relief was too small compared with what was to be accomplished, and in view of the suffering incidental to the treatment, to justify hopes of its ultimate success, although portions of wax were passing off occasionally.

On the 23d of July, he had a chill. The next day felt as well as usual, without fever, or local irritation; a catheter was introduced into the bladder without much pain, and was used frequently to discharge urine; pulse small; physical expression normal. At the end of forty-eight hours the chill returned, followed by a hot stage and sweating. Intermitting fever was fully disclosed. Three paroxysms followed, and under the use of quinine and other remedies, this subsided, and the patient became comfortable, though much reduced in flesh and spirits.

Small quantities of urine passed without the catheter; much mucus and pieces of wax with purulent matter passed with the urine every day. The urine was charged with uric acid, and the patient suffered much in passing it. The constant use of opium was necessary to render life tolerable.

The patient had experimented, himself, with a piece of the wax taken from the piece introduced into his bladder. He kept it in urine thirteen days.

This was changed to a pulpy appearance, as that discharged from the bladder after the use of chloroform.

A foreign body could no longer be detected by sounding in the bladder. Fine particles of wax were daily discharged, covered in part with calculous matter.

The distress in urinating, and the necessity of frequently introducing the catheter, induced me and the patient to give up all hopes of a cure, or restoring the patient to health, short of the operation of lithotomy.

Calculous deposits began to appear, covering the particles of wax discharged, which rendered it certain that concretions would form, and require for their removal an operation, unless the bladder was soon cleared. Treatment was used to prepare the patient for the operation before the urinary organs became irreparably diseased."

I received a letter from Dr. Wait, on the 10th of August, *twenty-one* days from the passing of the wax into the bladder, describing the effects of the treatment, and condition of the patient, with a request for me to visit him at the earliest possible convenience.

I visited him on the 11th, and made the operation of lithotomy.

* * * * *

After withdrawing the gorget I introduced the index finger of my hand, but could find no solid portion of the *wax*, but discovered it softened and spread over the anterior portion of the bladder quite to the sphincter, about the consistence of lime mortar, for plastering, and adhering to the mucous surface of that organ. I could not detach it with my finger, scalpel, scoop, or with forceps.

I finally succeeded in scraping it off from the surface of the bladder with the spoon-bill forceps, opened wide and closed, bringing out a quantity of this softened wax each time, till no more could be found with the finger.

There was but little bleeding during the operation. The bladder was thoroughly syringed out with warm water, and the patient made comfortable in bed with an anodyne mixture, and warm fomentations over the pubes, etc.

I left the patient in twenty-four hours, quite comfortable, in charge of Dr. Wait, who gives me the following history of the result of the case, viz:—

"That the symptoms of the patient were favorable, and the urine passed off through the wound till the fourth day, when some pieces of wax passed out of the urethra, followed by the urine in that channel. After this the urine passed mainly that way." My opinion is, that this wax was spread upon the inside of the mucous portion of the urethra, before the operation. In ten days after the operation, no urine passed through the wound; yet small calculous concretions, having a particle of the sealing-wax as a nucleus, varying in size from a pin's-head to that of a small pea, were constantly discharged. As the time lengthened they increased in size.

The nucleus was not in the middle of the calculus, but appeared indented into one of its sides. I think their formation was made in this way, viz: A particle of the wax, too small to be felt or found, remained attached to the coat of the bladder, calculous matter was deposited upon all its sides except that which was adherent; when they attained a certain size and the action of the bladder would disengage them, they passed to its neck for an exit.

In making an analysis of these calculous formations, I found them to be made up of the phosphate of lime. Nature's object in depositing this calculous matter upon the particles of sealing-wax, was probably to secure their separation from the bladder. No calculus was discovered or discharged that had not a piece of wax attached to it. These continued to be discharged till the twenty-third of September. The patient was alarmed with fears that he

was to be subject to the continuance of these formations. I advised him that when all the particles of wax had passed, no more calculi would form. The wound by the operation had nearly closed. On the twenty-fifth, after walking and exercising considerably, he had pain and stoppage of water, which occasioned great distress. A catheter was used, which gave relief; this was repeated daily; pieces of calculi passed.

On the thirtieth, a large bougie was used to dilate the urethra; small pieces still passed with the urine with ease and freedom. After this, larger pieces passed, which occasioned pain, but by the use of the bougie two large ones passed, and on the fourth of October the patient sent me the following letter:—

“DEAR DOCTOR:—About twelve o’clock Saturday last I was a happy man, and little cause have I since had to complain. I am entirely freed from disease of the bladder.”

CASE V. *A slate-pencil the nucleus of a calculus in the male bladder; lithotomy; recovery.* By Dr. Trowbridge. New York Med. Gazette, 1853.

A lad sixteen years old, from no assignable cause, introduced into his urethra a *slate-pencil*, two inches and a half in length. A physician attempted to extract it with small forceps, but pushed it into the bladder. In three days after, he suffered much pain in urinating. A mitigating course of treatment was given him to allay irritation; this was continued for three weeks, when I was called to visit him. I made the operation of lithotomy, much in the manner described in the above case, making the internal opening only sufficiently large for the introduction of my finger; this was introduced, and the pencil brought lengthwise upon it, and pressed against the coats of the bladder, and both brought steadily down to the opening at its neck, and a small pair of dressing-forceps passed and fastened upon the end of the pencil, which readily drew it from the finger. The pencil was thickly coated with calculous deposits. The patient, with the ordinary treatment, recovered in three weeks.

CASE VI. *A willow-stick the nucleus of a calculus in the male bladder; lithotomy; recovery.* By Dr. Trowbridge. New York Med. Gazette, 1853.

A third operation was made on a young man aged twenty-three. He had suffered for two years previous to my seeing him, with irritation and symptoms of a foreign body in the bladder. On sounding, I found a stone lodged near its neck. The sound, on passing into the bladder, was instantly in contact with a hard grating substance, which occasioned an opinion from a consulting surgeon, that the substance was calculous conerctions attached to the surface of the bladder, near its neck. Difference in opinion at the consultation, occasioned a delay for a few days in the operation. It was finally made, and two stones taken. One was small, of the usual form. The other large, one inch and a half in length, and three-eighths of an inch in circumference. On breaking it, a *willow stick* was found in its centre, which had been a nucleus for the commencement of his disease. He acknowledged that at that period he stripped the bark from a willow branch, and introduced it into the urethra; a portion of it was left and passed into the bladder. He soon recovered, and was entirely free from disease after lithotomy.

CASE VII. *A calculus adhering to the male bladder by a needle.* Lancet, 1855.

Mr. Simon, of St. Thomas’s Hospital, removed this calculus from a boy five or six years of age. On introducing his finger into the bladder after extracting it, he felt something unusual at the back of the bladder, which on removal proved to be half of a needle; the other half was found in the cal-

culus. Upon inquiry he heard that the needle had been accidentally pushed into the rectum by one of the family of the patient, whilst dancing the child, some years ago, and from thence it must have made its way into the bladder.

CASE VIII. A hair-pin the nucleus of a large calculus in a female child; lithotomy; recovery. By E. K. Parson, Surgeon, of Brighton, England. *Lancet*, 1846.

Sarah P——, aged five, admitted under the care of Mr. John Lawrence, Jun., on the 11th of March, 1846. On her admission she was unable to stand or even sit, remaining always in the recumbent position, and complaining of a constant pain in the lower part of the abdomen, greatly increased by any motion. There was incontinence of urine, the continual dribbling of which had produced considerable excoriation of the nates, thighs, and legs; the urine was clear and neutral, but rather pale. On the introduction of a probe into the bladder, a calculus of considerable size could be easily felt, lying close to the orifice of the urethra, with the mucous coat of the bladder in immediate contact; the stone could also be distinctly felt from the rectum. The child, in all other respects, was apparently in good health, though she complained much of thirst.

The mother states, that about sixteen months previous to admission, the child was taken ill with shivering, etc., at which period she became unable to hold her water, and complained of pain during its passage. She was attended for some time by a medical man, without any relief. The pain and incontinence gradually increasing, she was, after about five months, taken to another medical man, who pronounced the child to have stone, and recommended the operation of crushing; the parents not consenting, she was subsequently intrusted to a veterinary surgeon (!) with the intention of having the stone dissolved by means of internal remedies. The pain and other distressing symptoms gradually increased until her admission into the hospital. From the circumstance of the bladder retaining no urine, it was deemed more expedient to perform the operation of lithotomy, which was accordingly done on the 30th of March.

Operation.—A common director being introduced into the urethra, an incision was made at the side of the passage, commencing half an inch above, prolonged downwards and outwards at the side of the vagina, dividing the left nymphæ, and continued inwards to the bladder, so as to join the director at its immediate passage into the bladder, with the view of leaving nearly the whole of the urethra intact. An opening large enough to admit the forefinger being made, and subsequently, by dilatation, rendered sufficient for the forceps, the stone was easily grasped; but the anterior part being soft, broke down under the pressure, and was brought away in the blades of the instrument. The stone was again grasped, and extraction attempted, but considerable obstruction being experienced, the forceps were withdrawn and a careful examination of the impediment disclosed two portions of what appeared to be wire, thrust through the soft parts downwards and backwards into the rectum. All attempts at removal only increased the difficulties; and this fact being ascertained, the stone was pushed back into the bladder. The parts thus partially engaged were levered up, and with great difficulty brought out at the wound, and the stone was extracted.

The child was put to bed and covered up warmly; a little wine and water was given, and she, in a few minutes, fell asleep and continued thus for about an hour and a half, when, not having voided any urine, the wound was examined. A small coagulum was found blocking up the opening, which, upon removal, allowed the urine to pass freely.

March 31. Had slept well during the greater part of the night, and complains of no pain except smarting around the wound; urine passes freely, and is but slightly stained with blood; tongue moist; skin rather dry, pulse 130, rather full; bowels have not been open since the operation.

April 1. Had not slept quite so well as on the previous night, but yet was quiet; complains of a slight pain in the stomach, but upon passing some flatus she was relieved; tongue moist, but slightly white in the centre; pulse 124, and inclined to be a little sharp; skin moist and natural; bowels not relieved; urine passes freely and nearly clear; the integument around the wound is slightly red. Ordered a bread poultice to the wound, and a drachm and a half of castor-oil.

2d. Had passed a good night; no pain except smarting from the passage of the urine, which has been plentifully voided and is quite clear; bowels freely opened by the oil; pulse 116, softer; tongue moist, but still a little white; skin natural.

9th. Since the last note the child has progressed favorably; the urine has ceased to dribble, and she can retain it for about five or eight minutes.

20th. Wound rapidly healing; able to retain urine for about a quarter of an hour.

The power of retaining the urine gradually increased until her discharge from the hospital on the 6th of May, when the wound was entirely healed, and she was able to retain a teacupful of urine.

WEIGHT OF THE CALCULUS.

Weight, with the pin, four drachms and thirty-two grains.

COMPOSITION.

Uric acid	0.48
Mucus of the bladder	0.30
Ethereal and alcoholic extracts, of fatty acid nature . .	0.07
Urate of ammonia	0.05
Traces of iron, soda, and some indeterminate organic matter	0.10
	<hr/>
	1.00

Upon making inquiries of the mother, if she could in any way account for the presence of the pin, she stated that about three days previous to the child's first illness, she complained of a pricking sensation within the labia; she was then asked if she had introduced anything, and said "Yes," but upon repeated examinations, nothing being discoverable, it was believed that she had scratched herself with the hair pin, and nothing more was thought of it.

CASE IX. *A hair-pin the nucleus of an unusually large calculus in a young woman; attempted lithotripsy; lithotomy; recovery.* By Wm. G. Wheeler, M. D., of Chelsea, Massachusetts. American Journal Med. Sciences, 1853.

The specimen was brought by Dr. Wm. G. Wheeler, of Chelsea, Mass., who performed the operation for its extraction.

Dr. Stedman exhibited the calculus, and gave the following account of the case, furnished by Dr. Wheeler:—

A female, 21 years of age, came under Dr. W.'s care a few months since; she had for a long time suffered severely; all the usual symptoms of stone in the bladder were undeniably present, and, indeed, very marked. A sound being introduced by Dr. W., the presence of a calculus was readily detected. The severity of the local symptoms, and the apparently large size of the stone were the circumstances chiefly engaging attention. The stone seemed im-

movable, judging from the impression communicated to the sound while examining; the sensation would perhaps convey the idea of the calculus being fixed at certain points. The patient complained occasionally of great pain in the pubic region, as if something sharp pierced the neck of the bladder. Dr. W. was unable to determine the exact size of the calculus. With the hope that it might be sufficiently soft to be crushed, the operation of lithotrity was attempted. With the assistance of Drs. Stedman, of Boston, and Ingalls, of the U. S. Marine Hospital, Chelsea, two trials at crushing the stone were made unsuccessfully; the bladder was contracted and irritable, so as to allow of little or no distension by the injection of fluid; and, moreover, the stone proved to be hard, and of such size and shape that it could not be held or fixed within the grasp of the instruments. The constitutional symptoms, also, which followed each of the above attempts, were severe. Dr. W. feared lest inflammation might supervene, of a fatal nature, after the last trial.

Disappointed as to lithotrity, the operation of lithotomy seemed the only resource. The case was plainly stated to the friends; a preparatory treatment adopted, and the operation urged. On the 1st of October, the patient, having consented, was etherized, and the operation done by Dr. W., assisted by Drs. Stedman and Ingalls. The vagino-vesical method was chosen, as offering apparently the best chance for the patient, on account of the situation of the stone and the contracted condition of the bladder. The patient being placed in the usual position, an incision was carried downwards and backwards upon the groove of the staff; the operator's forefinger, passed through this opening, felt the stone, of large size, and apparently fixed at certain points. Fears of a sacculated condition of the bladder were suggested; further exploration by the finger discovered a projecting point, which was at first supposed to be a sharp corner or tubercle of the calculus; but it was finally concluded that it was some foreign body which had served as a nucleus for the calcareous deposit. Efforts to break the stone failed; and, the position of the forceps being changed, one blade was passed over the sharp point alluded to, and after much difficulty, manipulation, and delay, a stone was extracted weighing over two ounces and three-quarters, and there was found passing obliquely *through its centre, a large wire hair-pin*, measuring over three inches and a half in length. This pin, and the direction it had with regard to the incision, together with the size of the calculus, caused the delay and embarrassment in the extraction of the latter. Thus is also explained the seeming immobility of the stone at certain points.

The patient survives the operation, and has done remarkably well, with the exception that a small fistulous opening still remains. The local as well as the constitutional symptoms have been very mild, when compared with those which followed the previous attempts at lithotrity.

The history of the hair-pin is of some interest, as it gives a probable date of the commencement of the formation of the calculus. Since the operation the patient has stated that the pin *was introduced through the urethra about six years ago*. She never mentioned this fact to any one; preferring to suffer in silence. The foreign body caused some pain and uneasiness soon after its passage within the bladder, but no severe symptoms were manifested until about two years after its introduction, since which time they have gradually increased in severity.

Dr. Charles T. Jackson analyzed the stone, and found it to be composed mainly of phosphate of lime, colored a little with urate of ammonia. The rough surface which the calculus presents is owing to the action of the instruments during the previous efforts to crush it. The points of the hair-pin

were bent down upon the side of the stone by the blade of the forceps, thus facilitating the extraction of the mass, and also avoiding laceration of the bladder and adjacent parts, which had suffered so much from continued irritation.

Four months after the operation.—Dr. W.'s patient is out, and visits her friends; she has regained her usual health and strength. The fistula still remains, and has resisted all the usual modes of treatment; sutures have not been tried as yet, but will be attempted if required. A few weeks since, the opening seemed likely to close, as little or no water at one time escaped. From cold, or some other exciting cause, a small abscess formed within or near the neck of the bladder, which, in evacuating its contents, again reopened or enlarged the fistula.

CASE X. A brass pen-holder the nucleus of an enormous calculus in the female bladder; lithotomy; death. By J. F. May, M. D., Prof. of Surgery in the National Med. College, Washington City. *American Journal Med. Sciences*, 1852.

A few days previous to the operation just mentioned, I was requested by a physician in a neighboring town to visit a young girl, of fourteen years of age, whom he feared had a calculus in the bladder. The suspicion of the existence of a calculus was very recent (but a few days before my visit), for although her health had been declining for more than a year, and her sufferings had been very great, she had studiously endeavored to conceal from her friends her condition as long as it was in her power. I found her in a state of extreme emaciation, anæmie, and with a pulse constantly ranging to one hundred and twenty and upwards. She had a very frequent desire to evacuate the bladder, attended with great spasmodic suffering. The discharge from the bladder was of a most offensive nature, and seemed to be an admixture of urine, blood, and pus, the latter appearing to predominate over the natural secretion. She was unable to get any sleep at night, except by the influence of opiates most freely administered.

On examining the bladder with a female catheter, I found that the instrument would penetrate only to a very short distance, as it came in contact with a calculus as soon as it passed through the urethra, and, on introducing my finger into the vagina, I found that the entire fundus of the bladder was filled by the stone. It appeared, in fact, to occupy the whole bladder, which was contracted closely around it.

Although her case seemed to be almost hopeless, nothing could be done but to remove the cause of her great suffering. I accordingly incised the urethra on each side, and to a sufficient degree to enable me to pass into the bladder a pair of strong crushing forceps, with which I hoped to be able to break down the stone. Upon introducing my finger, after incising the urethra, and in the endeavor to insert it between the stone and the side of the bladder, I felt a substance with a sharp edge projecting from it. She had, some time previous to the operation, stated that she had swallowed a brass pen-holder, and that it was in her bladder. This object I could now distinctly feel, imbedded in the centre of a calculus, which filled the bladder so closely that it was with much difficulty I could pass my finger between it and the walls of the viscus. The metallic holder was fixed in a transverse position. After several efforts, I succeeded in bringing one of its ends towards the opening in the urethra. And then, after much difficulty, with stout polypus forceps, succeeded in loosening and finally extracting it from the stone. It was of brass, a little more than three inches in length, and about a quarter of an inch in thickness.

The stone appeared to be broken into several fragments by the extraction of

the brass tube from it, which also was completely flattened anteriorly, where it was grasped by the forceps. The fragments were even still further crushed, and a large portion of them removed from the bladder; an opiate was then administered. She continued to pass, for the two succeeding days, other portions of the calculus in small pieces, and in powder; and, for several days, her condition seemed to be improving, but the discharge of pus from the bladder still continued; and, though her suffering was much less, she gradually declined, and died in about two weeks after the operation from the extensive disorganization and ulceration which the bladder had undergone.

I very much regret that I could not obtain permission to examine the diseased organ. The stone, as well as I could judge by the examination which I made of it in the bladder, filled up the organ so closely, that its function as a receptacle for the urine was entirely destroyed, the fluid merely trickling over it from the ureters, and then dribbling off by the urethra. Whether she had introduced the pen-holder before the existence of the calculus, and it had then become the nucleus for its formation, or whether it had been used by her to relieve herself in urinating, while the calculus was small, and it had then accidentally slipped into the bladder, is a point upon which I am ignorant.

CASES XI. and XII. *Wax forming the nucleus of urinary calculi in the male bladder.* Sir Benjamin Brodie's Lectures. Lancet, 1844.

I operated on a young man for stone in the bladder, and on cutting through the stone there was a large piece of common wax in the centre. The preparation, I believe, is in the museum. This was a very foolish young man, as you may suppose, who happened, unluckily for himself, to have a wide urethra, and in some fit of folly he rolled up a piece of wax, introduced it into the urethra, and it gradually found its way back to the bladder. I saw him at the time, and, as I supposed that the wax had gone into the bladder, I recommended him to keep quiet, and let the case be thoroughly investigated. But he was engaged to go to India; he did not suffer inconvenience, as if from the wax in the bladder, though we had a right to conclude it was there, and, contrary to my advice to keep himself quiet, he sailed for India. He came back two years afterwards with a stone in his bladder.

A more extraordinary case occurred in the practice of Mr. Keate. I saw the patient with him, and assisted in the operation. A gentleman had symptoms of stone in the bladder, and on cutting into that organ he found that there was no stone, but a great piece of common sealing-wax, of which he drew out several inches in length. This monstrous blockhead—for so I must call him—being tipsy, thought he would pass a bougie for himself. He imagined that wax was wanted for a bougie; he therefore procured the sealing-wax, softened it by the fire, rolled it up in his hands into the shape of a bougie, introduced twelve or thirteen inches through the urethra into the bladder, and there it lay coiled up.

CASE XIII. *A ring-shaped calculus, in the male bladder, formed on a hair, removed from the umbilicus, the urachus having remained open.* Lancet, 1850.

J. C——, aged forty, has suffered for more than a year from frequent and painful micturition. On sounding, a calculus was readily detected. He mentioned that, upon attempting to make water, and during violent efforts at work, a portion of the urine sometimes escapes at the navel, which is open, and that, as far as he knows, has been so from his birth. The catheter introduced into the bladder through the urethra was readily made to appear at the umbilical opening. Thinking that the stone might be extracted through this aperture, Mr. Paget distended the bladder to the utmost, with warm

water, the umbilical aperture being tightly plugged, the patient reclining with his head lower than the pelvis, with the intention of removing the plug, thinking that the calculus might be flushed out with the water; but it then occurred to him to try first the finger at the umbilicus. It readily passed, and when at full length down the unnatural passage, caught within the circle of the calculus sufficiently to enable him to drag it to the side of the bladder, and extract it. The nucleus was found to be a hair, and on carefully truncating it, the projecting extremity was seen.

The phenomena connected with the opening are thus described: There is a circular deficiency in the linea alba an inch in diameter, its margin being thickened and of cartilaginous hardness. Through this protrudes a hernia of the size of a goose's egg, which in lieu of ordinary integument is covered by mucous membrane, the surface, however, becoming dry when exposed for any length of time. He never makes water while the hernia is out, for, when called to an effort for that purpose, the first act of the bladder is gradually to draw into the abdomen the whole of the protruded substance; its first contractions have no other effect, and it seems not to have the power to force the urethra until that is accomplished. At the latter part of this act, at the instant of the disappearance of the hernia, there occurs a rather forcible jet of urine from the opening; the flow from the urethra also commences at this juncture, and the bladder is emptied in the usual way, the jet from the umbilicus ceasing, not to be renewed, except by a violent accelerating action of the expulsor muscles. He can retain a pint of urine. By watching the first contractions of the bladder, it becomes evident that to the thickened margin of the umbilical aperture are attached the muscular fibres of the bladder extended along the urachus. The pouch of the hernia is formed by eversion of the posterior part of the neck only, which is of course attached to the upper half of the aperture, and when protruded presses upon the hard edge of the lower half sufficiently to prevent the escape of urine, except under straining efforts of the abdominal muscles. He wears a girdle, with a thick pad of flannel, to catch the urine. With the extraction of the calculus all the bladder symptoms ceased, and it was thought unadvisable to interfere with the congenital defect.

CASE XIV. *Lithotomy successfully performed on a man aged seventy-one, and forty-five calculi removed, by a surgeon aged eighty-four; recovery.* Lancet, 1840, vol. xxxvii.

M. Souberbielle lately performed the operation of lithotomy on a gentleman, 71 years of age, who had labored under symptoms of stone for 18 years. At length he found it necessary to submit to an examination, and was sounded by three surgeons at Versailles, but without any result. As the pains in the region of the bladder continued, he was again sounded by one of the first surgeons in Paris, but no stone was discovered! M. Souberbielle was next consulted; he was fortunate enough to discover the existence of calculi, and performed (as he commonly does) the operation *above* the pubes, and extracted from a cyst 45 calculi of various sizes, the largest being as big as a large almond. On the 14th day after the operation, the patient was able to ride out in a carriage, and on the 15th dined with his family.

CASE XV. *Lithotomy successfully performed on a man in his eightieth year; two calculi removed; recovery.* Lancet, 1851.

Samuel T— was admitted on Monday, July 27th, supposed to be suffering from stone in his bladder. He said he had passed with his urine, a large quantity of gritty matter for the last thirty years, and that about twenty years since he introduced a catheter, and thought he struck against something like a stone. His sufferings not being great, he had quacked himself with divers

herbs; but within the last few years he had endured great pain, so that he could tolerate his sufferings no longer, and therefore came into the hospital, to use his own words, "to be cut," and said that "he would have it out," if it cost him his life.

Mr. Gisborne readily detected a large stone, but the patient's great age appeared to him and his colleagues, Mr. Fox and Mr. Johnson, much against the success of an operation. The patient, however, was resolute; and on Thursday, the 7th of August, Mr. Gisborne, after the administration of chloroform, performed the lateral operation, making a very free external incision. The long bent forceps were required for the extraction of two rather large, oval stones, each measuring about four inches in circumference, one weighing about ten drachms, and the other nearly seven drachms.

August 8.—The patient passed a good night; urine passes freely by the perineum. Ordered, an opiate at bedtime, and castor oil in the morning.

9th. Bowels relieved; no pain.

10th. Passed a restless night; great depression of spirits; tongue dry; pulse quick; bowels open. A mixture of ammonia and ether every three hours; beef tea; port wine.

11th. Rather better. The same diet and medicine.

12th. He gradually rallied, and has ever since progressed most favorably; the urine partly passes through the penis.

On the 26th of August he took meat and wine, sat up for some hours, and was cheerful at the result of the operation.

CASE XVI. *A large calculus voided from the male urethra.* Lancet, 1843, vol. xlv.

Wm. Jackson, a mariner, of middle stature, who has been subject to symptoms of calculus for the last two years, applied to me for relief on the 17th of this month, as he said that his sufferings had lately been much increased. I ordered him the following pills and mixture: R. Castile soap, a drachm and a half; Powdered rhubarb, half a drachm; Oil of juniper, ten drops. Mix; make into thirty pills; one to be taken night and morning. R. Carbonate of soda, two scruples; Oil of juniper, twenty drops; Spirits of nitric ether, half an ounce; Water, seven ounces and a half. Mix; a tablespoonful to be taken twice a day.

The next morning he presented himself at the dispensary, with the penis much swollen, and with the inclosed stone projecting from the orifice of the urethra. With the assistance of Mr. Hildyard it was with some difficulty extracted, and on being measured was found to be one inch in length, and one and a half inch in circumference; it weighed forty and a half grains. It appears to consist of uric acid, but as the size of the calculus is more remarkable than its composition I hesitated to break it. I directed the patient to call on me on the next morning, should any unfavorable symptom arise, but as I have seen nothing more of him, I conclude that all has gone on well.

CASE XVII. *A very large calculus extracted through the female urethra.* Lancet, 1850.

The patient, Maria N—, aged twenty-three years, had experienced for a long time much irritation about the kidneys and urinary apparatus, for which different palliative remedies were administered, but with little relief. The patient was lost sight of for some time, and I was again applied to; upon introducing a sound, I found a stone, evidently of considerable magnitude. As soon as I could get the patient into a fit condition, I succeeded, with the aid of Weiss's dilator and forceps, after about two hours' gradual dilatation, in

extracting, without cutting, a stone of oblong form, and rather rough, weighing two ounces, four drachms and twelve grains; the longest circumference, six inches and a quarter; shortest, five inches and a half; longest diameter, two inches and a quarter; shortest, one inch and five-twelfths. The patient rapidly recovered. Incontinence of urine continued for some time, but she can now retain about half a pint, and is in good health. A difficulty presented itself in the operation. The patient had had, in early life, hip-joint disease, attended with absorption of the head of the femur; consequently the thigh could not be flexed.

CASE XVIII. A large calculus voided from the female urethra, having a hair-pin, which was swallowed twenty-seven months previously, for its nucleus. Lancet, 1845.

Margaret L—, aged twenty-six years, was admitted into the Salford Workhouse, on the 12th of August, 1845, in the last month of her pregnancy with an illegitimate child. For several weeks she suffered from pain in the side and back. From Sept. 10 to 14 she complained of constant pain in the urethra, difficult micturition, and of a feeling of tension and bearing down, as from the passage of a hard body of considerable size. On the 14th, after much painful straining and bearing down when voiding her urine, she parted with a calculus, without any manual interference. Its weight was four drachms, two scruples, and four grains; its length, two inches and a quarter; breadth, one inch and a half; and thickness, five-eighths of an inch. It was of a flattened oblong figure; its nucleus a common hair-pin, the points of which, as well as the convex extremity, were equally evident to the sight. Its probable composition is phosphate of lime and the triple phosphate of magnesia and ammonia. She had no pain afterwards, expressed herself greatly relieved, and was as well as women usually are toward the close of gestation. On the 21st (one week after) she gave birth to a full-grown child, after an easy natural labor, from which she quickly recovered.

Upon tracing the history of this case, it appears from the evidence of three persons then present, that the pin was really swallowed on June 6, 1843. The woman was straightening her hair with the hair-pin between her teeth, when one of her companions pulled her hair behind, causing her to laugh, and throw her head back, when the pin slipped down the œsophagus. During the first twelve months she felt little inconvenience, with the exception of slight pain in the bowels, attended with constipation. On the 26th of April, 1845, she was admitted as home-patient of the Charlton Dispensary, under the care of the house-surgeon. She remained under this institution five weeks, during which time she complained of continued acute pain in the left inguinal region, of incontinence and increased flow of urine, a profuse, purulent discharge from the urethra, scalding and obstinate constipation, attended with frequent discharges of blood with the feces. At the recommendation of the house-surgeon, as her case was considered more proper for the Manchester Infirmary, she gained admission into that institution. There she remained two months, suffering from the same symptoms, only the urine was much increased in quantity, but gave no evidence, upon being tested, of saccharine matter. She frequently parted with six quarts of urine, during the night, and generally seven quarts in the twenty-four hours; complained of pricking pain in the left groin, increased on bending the body forwards and on sitting down, but was never perfectly free from it excepting when in the recumbent position. She was much relieved while in the infirmary, but as her confinement was evidently near approaching, was obliged to leave and gain admission into the Salford Workhouse to lie in. This patient never once mentioned to any of her medical advisers the circumstance of

having swallowed the hair-pin, lest (according to her statement) she should be compelled to undergo an operation for its removal. As she was pregnant and unmarried, Mr. Brownbill suspected she might have introduced the pin into the vagina for the purpose of procuring abortion; but from the nature of the evidence, he is now fully convinced of the contrary. Being interested in her case, he referred to the medical gentlemen who had the treatment of her, and from them gleaned the above statements. Since her confinement he has made an examination per vaginam, but without discovering any alteration of structure that would indicate its course into the bladder. She still complains of pain upon pressure at the lower and left side of the abdomen and groin. From the symptoms above related, he thinks it most probable that the pin passed from the sigmoid flexure of the colon into the left side of the bladder."

In this singular case, there is probably little doubt that the patient swallowed a hair-pin, but very great doubt of its identity with that found in the bladder.

On the size of human calculi. By Sir Astley Cooper. *Lancet*, vol. i., 1826.

The usual weight of calculi formed in the bladder is from half an ounce to two ounces; most frequently under two ounces.

The largest stone I ever extracted is the one I now show you; its weight is *sixteen ounces*. After I introduced a pair of forceps, I was obliged to send for a gimlet, in order to bore it, but it was so firm that I could not. I succeeded, however, in extracting it by disengaging one blade of the forceps, using it as in midwifery, and then by bringing the stone under the pubes and above the os coccygis, I managed so as to remove it.

Mr. Mayo, surgeon at Winchester, extracted a stone *fifteen ounces* in weight, but that was broken.

The largest stone that I ever saw extracted without its being broken (at the same time the patient surviving), is one that was taken from a person at the Norwich Hospital; it weighed *eight ounces*. But the weight and size of stones do not bear a relative proportion, for some stones of considerable magnitude do not weigh much, whilst others which are small weigh a good deal. A very large stone, that was found in a body after death, weighed *twenty-five ounces*. There is one at Trinity College, Cambridge, which weighs *thirty ounces*; it is stated to weigh thirty-three ounces, but I believe thirty is the true weight.

The stone of the greatest size and weight I ever heard of, was one taken from the body of a highly respectable individual, after death, by two eminent surgeons of this town. He had a paralysis of the lower extremities, and half of the body was insensible. In this state he was operated on for stone; but after various attempts at extracting it, the operation was postponed for a week in order that some instrument might be obtained in the mean while, by which the stone might be broken. At the end of the week the operation was again repeated, but the stone was neither to be broken nor extracted, and the gentleman died from irritation. On examining the body after death, there was found a large stone in the bladder, which there was a difficulty of raising from its seat; it could not have been extracted if the high operation had been performed; it weighed *forty-four ounces* and a slight addition, how many grains or drachms I am not exactly sure.

CASE XIX. *Lithotomy; a very large stone extracted after repeated efforts and much delay; patient recovered.* *British and Foreign Med.-Chir. Review*, 1844.

John M'Gregor, corporal in the Mounted Coast Guard, aged 49, entered Melville Hospital, Chatham, with symptoms of stone in the bladder, which

he had labored under, more or less, from June, 1813. On sounding him on the 18th of June, 1843, Dr. Rac, deputy inspector, found a large stone, round the apex only of which the instrument could pass, and examined by the rectum, the finger could neither raise nor pass beyond the stone. The patient himself declared that he frequently felt the stone move in the bladder, and that he could frequently retain his urine for two hours. Under these circumstances, Dr. Rac determined to perform the lateral operation. The description of this we give in his own words:—

“The staff being introduced, and the patient secured in the usual way, I began my incision nearly two inches above the anus, and a quarter of an inch to the left of the raphé, at once an inch deep, rendering it more superficial as I passed the anus; the cellular membrane was then further divided, and the transversus perinei muscle; my finger was then without difficulty pushed into the deep-seated fascia, the groove of the staff felt for and cut into; a probe-pointed knife was now substituted for the former one, fairly inserted into the groove, carried on to the bladder, and next moment my finger was on the stone. Had this been of the usual magnitude, the patient would have been replaced in bed in a quarter of an hour with the loss of not six ounces of blood; but now all our difficulties began, and I was convinced that the patient could not have felt the stone moving for years, nor could he have retained his urine for two hours; indeed, he has since informed me that he could not keep it more than a quarter of an hour during the day, or half an hour at night, and that he concealed his complaint as much as possible. The stone was now found to be of great size, over which the thickened coats of the bladder were permanently contracted. It seemed to be of a conical shape, the apex only being free, and to pass the forceps over it, and expand them for the purpose of extraction, was perfectly impracticable; the blades actually bent, and had I used more force, in the opinion of all present, I must have lacerated the bladder; the small end of a scoop could not pass without danger of perforation. The lower part only could be grasped, and the forceps almost invariably slipped, bringing away debris and numerous fragments each time. After many and repeated trials to extract, I handed the forceps to my able assistant, Dr. Charlton, but with no better success. The patient had now been an hour and twenty minutes on the table, and although he bore his suffering with heroic firmness, worthy of a M'Gregor, still he was getting exhausted, and it became absolutely necessary to desist. The bladder was washed out with warm water, and an elastic tube with lint placed in the wound, and he was carried pulseless to bed; warm brandy punch was administered, and warmth applied to the feet; an anodyne was afterwards given, and in a short time he rallied.”

He recovered from the effects of the operation marvellously. The remainder of the case is instructive.

“The wound was studiously kept open for further proceedings; the stone was occasionally felt, and as had been predicted by my friend, Mr. Fergusson, of King's College, to whom I had related the case, became looser and less firmly embraced by the bladder. During this interval the director-general, Sir Wm. Burnett, had ordered, at my request, a pair of forceps to be made very strong, and with separate blades, like those for midwifery; with which I expected either to crush or extract. Having been in town, however, I called upon Mr. Guthrie, who kindly directed Mr. Simpson of the Strand, to make for me a crushing instrument, which he thought would suffice to break the calculus. Mr. Fergusson, on the same day, loaned me one still more powerful, but on trial, neither of them had sufficient space between their prongs to grasp the stone, whose longest diameter was between the fundus and prostate. While waiting for my new forceps, I received a note from Mr. Fergusson, of 27th of January,

saying that he was called to see a lady at Chatham, would be down the following day, and, in case I had not succeeded in applying the crusher, would bring two fresh instruments with him. He came accordingly, Jan. 28th, bringing two pairs of forceps lined in their points, and one with a peculiar hinge, with which he had extracted several large stones. On minutely examining the situation and size of the calculus, both by the wound and rectum, Mr. F. was of opinion that it might then be extracted, though probably with some difficulty. Whereupon I waived all ceremony or selfish consideration, felt for the safety and welfare of my patient, was glad to avail myself of Mr. F.'s experience, skill, and dexterity in such cases, and requested he would proceed to extract. He kindly complied; little preparation was necessary; the incisions were already made. He introduced a pair of his own forceps, and was not long in extracting, though he met with much resistance, and the forceps slipped twice. Several broken pieces were extracted by the scoop; the bladder was washed out with tepid water, and the patient placed in bed, complaining of much pain in the wound and in his back, and subsequently had a rigor. Some wine was given, and a morph. draught at bedtime. He passed a good night, and in the morning was free from pain or fever. Pulse 96, soft and small. Bladder washed out with tepid water injected by the penis. To have wine and arrowroot.

The stone itself, including the fragments, weighed nearly eight ounces, and, allowing half an ounce for the loss (though my assistant and others say that there was more than a full ounce), the stone must originally have been *nearly nine ounces* in weight. It was smooth externally, and composed of circular laminae, seemingly of triple-phosphate formation, but hard and firm in its interior part. To its smooth surface, and the firm manner in which it was held by the bladder, may be attributed the comparative ease with which the patient rode on horseback for such a number of years, and which a loose body of such magnitude must have rendered impossible. This case has caused me much anxiety; yet I do not regret that the stone was not extracted on the first occasion, considering the difficulties I had to contend with; and had I persisted longer, or used more force to accomplish my object, the patient must have died from exhaustion and great constitutional injury. By delay, allowing him to recover himself, and keeping the wound open for future proceedings, all has done well: and although I am indebted to the opportune arrival of Mr. Fergusson, yet I feel confident that I would have been able to extract or crush with the forceps which Mr. Simpson has now completed for me."

The issue was most satisfactory. On the 5th March, it is reported that for three days no urine had passed by the wound, which was nearly cicatrized. On the 19th of April he was discharged perfectly cured.

In the above case, the exact dates are essential to its due interest. First we have symptoms of stone, June, 1813; then, June 18, 1843, time of sounding and operation; next the removal of the calculus, Jan. 28, 1844; and lastly, the recovery of the patient, 19th April, same year. He labored under stone thirty years; was cut, but operation not completed for seven months and ten days; and was cured in about three months after its performance.

CASE XX. *Lithotomy. A large calculus successfully removed.* By Benj. W. Dudley, M. D., Emeritus Professor of Surgery in Transylvania University, Lexington, Kentucky.

In a letter to Dr. Hammond, of Macon, Georgia, in the *Southern Med. and Surg. Journal*, 1850, Dr. Dudley says that "Taylor, a youth of the mountain region of this State, came to Lexington in his eighteenth year, after six years' suffering, and had a calculus removed from his bladder, of eleven inches in its great circumference and three inches in its smallest diameter, weighing

about *nine ounces*. The extraction was followed by sloughing of the bulbous portion of the urethra, together with the whole of the accelerator urinæ muscles, and a large portion of the perineal areolar tissue.

"At the end of the sixth week, the wound was healed. The patient was dissatisfied because the contents of the bladder could not be projected as far as he had expected: a defect originating in the loss of the accelerator muscles. He is, however, the father of a large family of children, and was living last fall, thirty years since the operation."

CASE XXI. *A calculus weighing seven ounces removed by lithotomy, from a girl aged fourteen years.* Lancet, 1848.

Mr. Bullen, of Ipswich, thus briefly mentions this singular case, in a late number of the *Provincial Journal*. The history of the case, and the steps, may be advantageously described at length:—

"I operated, with a common director and a straight bistoury, upon Sophia Cooper, fourteen years of age. I extracted a calculus, weighing *seven ounces*. This enormous mass was of course broken into many pieces. Seven portions, each as large in size as an ordinary calculus, were removed by the forceps, some with considerable difficulty, from their ragged edges becoming entangled in the soft parts. The smaller fragments were extracted by the scoop.

I was fortunate enough, after the operation, to be able to adapt the fragments so accurately as to make the stone complete. It is composed of oxalate of lime, with a nucleus of uric acid, and measures round its largest circumference eight inches and a half, and round its smallest six inches and three-quarters, and is about the size of a swan's egg.

Up to the present time the patient has progressed without an untoward symptom."

CASES of large calculi. By Prof. Gross on the Urinary Organs.

Ambrose Paré relates the case of a confectioner, cut in 1570 by John Collet, whose stone weighed nine ounces, and was three inches and a half in diameter.—In an instance described by Tolet, a calculus weighing ten ounces, and measuring nearly four inches in diameter, was happily extracted, and the patient had recovered from the immediate effects of his wound, when an abscess formed in the kidney from the presence of a concretion, and terminated fatally on the ninth day from the operation.—Gooch relates a case in which Mr. Hamer, of Norwich, removed, by the lateral section, a stone of the weight of fifteen ounces, its diameter being four inches and three-quarters in one direction by three and a half in the other. The man, who was forty-eight years of age, survived, though the wound never entirely healed.—Cheselden withdrew a concretion of twelve ounces, and succeeded in curing his patient.—Klein successfully extracted a stone of thirteen ounces; it was somewhat conical in its form, and was nearly nine inches in circumference at its largest extremity, by three inches and three-quarters in length. The same eminent surgeon refers to a case in which a concretion weighing twelve ounces and two drachms was successfully removed.—In 1818, Charles Mayo, Esq., of Winchester, operated upon a man aged twenty-eight, and extracted a stone of fourteen ounces and two drachms, avoirdupois; it measured eight inches and a half in its smallest circumference by rather more than ten in the largest, and broke into several big pieces in the attempts to extract it.—Mr. W. B. Dickenson, of England, successfully removed, from a man of sixty-two, a calculus of a globular shape, and composed chiefly of phosphate of lime, which weighed eleven ounces. It broke into several fragments, which were taken away piecemeal. The operation was followed by sloughing of

the rectum, and when the case was reported, several months afterwards, a small fistulous opening still existed between this cavity and the bladder.

Although the above cases clearly show that a stone, even of large size, may occasionally be successfully extracted, yet it is equally certain that they must be regarded as so many exceptions to the rule, rather than as the rule itself. Most generally, indeed, the patient dies either from exhaustion during the operation, or from the effects of inflammation a short time afterwards. The following examples will place this subject in a more satisfactory light:—

Fabricius Hildanus records a case operated on by Vitellius, in which the stone weighed twenty-two ounces; it was four and a-half inches in length, and three inches and a half in width. The man, who was twenty-one years of age, died under the operation, which was very difficult, painful, and protracted.—Geyer witnessed an operation on a boy in which the calculus was of the volume of a turkey's egg, and so adherent to the bladder that it had to be broken and extracted piecemeal. The fragments weighed ten ounces, and the patient died three days after the operation.—Pallucci, La Motte, Vidal, and Eller, all mention examples of twelve ounces, which were extracted by operation, but in one instance with a successful result.—Charles Preston states that he saw at Paris a stone which weighed fifty-one ounces, which was taken from a religious brother in 1690, who died before the operation was concluded.—A calculus of the weight of eighteen ounces is described by Borellus as having been extracted by Quesnotus, but the patient did not survive.—Marteau de Grandvilliers removed one of fourteen, and another of twelve ounces, with fatal results.—Mr. Birch extracted a stone of sixteen ounces from a man in St. Thomas's Hospital, London.—Deguise removed one of thirty-one ounces from a patient aged sixty-five, by the high operation, having previously opened the bladder through the perineum. Death ensued on the sixth day.—Sir Astley Cooper cut a man forty-three years of age, and found a stone which weighed sixteen ounces. The diameter in the long axis was four and a half inches; in the short axis, three and a quarter inches. It could not be broken, such was its firmness, and the wound in the perineum was, therefore, obliged to be extended as far back as the sacro-sciatic ligament. The patient survived the operation only four hours.—In the case of a man forty-three years old, cut by Mr. Dalrymple, in the Norwich Hospital, in June, 1818, the weight of the calculus was upwards of twelve ounces, and death occurred at the expiration of about three hours. The stone could not be broken, and, after the lapse of about an hour, all hopes of extracting it were abandoned.—Professor Graefe, of Berlin, removed from a man, aged thirty-eight, by the lateral section, a calculus which weighed twenty-one ounces and nearly four drachms. Its length was four inches and a quarter, its breadth three inches and three-quarters, and its thickness nearly three inches. Immense difficulty was experienced in effecting its extraction. The patient, who had suffered from his earliest infancy, was at first much relieved, but unfavorable symptoms soon appeared, and he died on the eleventh day.—Dr. Mettauer, of Virginia, has in his possession a calculus of urate of ammonia, weighing upwards of sixteen ounces, which he removed by the lateral section, the patient, whose age I have not been able to learn, making a good recovery.

Many years ago, Dr. John D. Godman cut a patient at Cincinnati, for a stone which was found to be so large as not to admit of crushing or extraction. After numerous attempts to free the bladder, the case was abandoned as hopeless. The wound healed up, and the man subsequently walked to Carlisle, Pennsylvania, a distance of nearly seven hundred miles. Here he

was operated upon a second time, with a like result, by Dr. Given. After recovering, he proceeded to Philadelphia, where he was finally relieved by Dr. Gibson and Dr. Physick. The bladder being opened, the stone was found almost to fill the organ, and was, therefore, obliged to be broken before it could be extracted. The patient recovered in a fortnight, and again walked home, as Dr. Chapman facetiously remarked, "a stone lighter than when he came."

It is said that Marjolin once met with an instance in which the stone was so large that it was necessary, before extraction could be effected, to saw through the bones of the pubes.—McGill, an English surgeon of the last century, once performed the high operation, without being able to remove the stone. The patient died on the fourteenth day, when the attempt to extract the calculus was renewed, the straight muscles being previously cut away at their inferior attachments. This method also failing, he sawed off one of the pubic bones, and then succeeded.

A very remarkable case of supra-pubic lithotomy, and one that deserves to be reproduced here, occurred in 1837, in the practice of Professor Uytterhoeven, Surgeon to St. John's Hospital, Brussels. The following is an outline of its more important features:—

A man, aged thirty-nine, a native and resident of Brussels, had labored under vesical disease nearly twenty-seven years, when he was lithotomized. He survived the operation eight days. The calculus, which weighed upwards of two pounds, was of a gourd-like figure, and was accurately moulded to the shape of the inside of the bladder, being nearly seven inches in length, upwards of four inches in breadth at the broadest part, and nearly two inches and a half in thickness. It had a rough, tuberculated surface, and appeared to consist of a number of thin, friable lamellæ. The walls of the bladder were indurated, and an inch thick, except at the point corresponding with the summit of the concretion, where they were completely worn down to the peritoneal coat. They contained several purulent depôts and fistulous passages. An immense abscess occupied the left iliac fossa. The small intestines and the mesentery were highly inflamed.

Probably the largest human calculus was that taken from a priest, after death, in 1690, and preserved in the Charity Hospital of Paris; it weighed 51 French ounces.

CASE XXII. Probably the largest human calculus; weight, forty-four ounces; lithotomy; death. By Sir James Earle, F. R. S. *Lancet*, 1853.

Sir Walter Ogilvie, Bart., of Dundee, at the age of twenty-three, active and healthy, was crossing the ferry at Leith, when he received a blow on his back from the boom of the vessel, which paralyzed the pelvis and the lower extremities. During two months he was obliged to have his water drawn off; for fourteen months he remained in bed, and though he then recovered the use of his bladder and of his limbs sufficiently to walk across the room, his health continued many years in a weak and precarious state, while the limbs acquired little additional power.

About twenty years after the accident, perceiving symptoms of stone in the bladder, he was examined by Mr. Benjamin Bell, at Edinburgh, and a stone was felt, which was judged to have attained a considerable size. The operation of extraction was then recommended, but was postponed from time to time, though his health declined, and the irritation and pain about the bladder gradually increased. Sir Walter continued to endure this state of existence twenty-eight years from the time of the accident, when he became unable to make water in an erect position. This inconvenience increased to

such a degree that latterly he could make none without standing almost on his head, so as to cause the upper part of the bladder to become the lower; and this he was obliged to do very frequently, sometimes every ten minutes, as the quantity at each time was less than the measure of a wine-glass, and when he used exercise it was tinged with blood.

At the age of fifty-three, thirty years after the accident, the spasms and fits of pain, from the urgent desire to void urine, became so frequent and violent, and his life so completely miserable, that he was determined to have the stone extracted. I received a letter requesting my opinion whether a paralytic state of the lower limbs was a prohibition to the operation of lithotomy; on my reply to the contrary, he was put on board a ship, and conveyed to the Thames; brought in a boat to Hungerford-stairs, and in an easy carriage to Hanover street, without suffering any inconvenience of material consequence.

Towards the latter end of July, 1808, I visited him, when he gave me a clear and distinct account of what has been related, and added that the stone could be felt above the pubes. At first, I much doubted of the large prominent tumor which I saw in the lower part of his belly being a stone; but, on attempting to pass the sound, it would not enter the bladder, being stopped by a solid mass; and on further examination I was thoroughly convinced that there was a stone of sufficient size to fill the bladder. On consulting with Mr. Cline, it was agreed that the extraction must depend on the consistence of the stone: if it proved soft, as is well known to be frequently the case, it might be taken away; but if too hard to be broken, it would be too large to be extracted whole, and must be left.

The operation of extracting it above the pubes was thoroughly considered, and concluded to be uncertain and dangerous, because the bladder, thickened and exquisitely irritable, could not bear to be further distended with fluid; and the stone, although so large, had not raised it sufficiently high to obviate the danger of wounding the peritoneum, and penetrating into the cavity of the abdomen. The usual lateral operation was therefore judged to be the only safe and probable means to be attempted.

After some consideration, Sir Walter, thoroughly and perfectly aware of the difficulties which might reasonably be apprehended in the extraction, from the magnitude and also from the uncertainty of the structure and consistence of the stone, determined to submit to the operation; and Mr. Cline was requested to perform it.

On the 11th of August he was placed in the usual situation, and the proper ligatures were applied; but it was soon found that the lower limbs were so incapable of action or resistance, that they were left unconfined. The staff could be passed in no further than the neck of the bladder; the division of the urethra and prostate gland was made with the scalpel and probe-pointed bistoury. When this was accomplished, it was found impossible to introduce any kind of forceps; but, on pressing hard with the finger, part of the stone felt soft, gave way, and made some room for the forceps, which brought away several portions, and, with the assistance of a scoop, as much stone was extracted as would have filled a large tea-cup; but the great mass beyond what the finger could reach on either side still remained hard and impenetrable; and, after repeated trials with forceps of different kinds and of the strongest powers, it was found impossible further to reduce the size of it, or take it away. The patient, after great suffering, died ten days after the operation.

Post-mortem examination.—On opening the abdomen, the bladder was found much diseased and thickened, firmly embracing a stone of extraordinary magnitude, and appearing to be completely filled with it. On dividing the bladder from the pubes backwards to the rectum, the stony mass was uncovered,

which I attempted to take away with the larger forceps, but it was impossible. It was then raised, by getting the hand under it, with considerable difficulty, as the cohesion between the bladder and the stone was very strong, though there did not appear to be any diseased or distinct adhesions. When taken out, the form of the stone appeared to have been moulded by the bladder; the lower part having been confined by the bony pelvis, took the impression of that cavity, and was smaller than the upper part, which, having been unrestricted in its growth, except by the soft parts, was larger, and projected so as to lie on the pubes. A large excavation had been made in the lower part, which lay on the neck of the bladder, by the operation. The weight of the stone was *forty-four ounces*.

CASE XXIII. *Extraordinary tendency to the formation of urinary calculi; forty-five pounds secreted in fifteen years.* By the late Prof. Sewell, M. D., of Washington City. Boston Med. and Surg. Journal, 1839.

Salvador Catalano, aged 72, a native of Italy, came to this country in 1805, in the capacity of sailing-master. Soon after his arrival he was employed by our government, in the Navy Yard at Washington, as an inspector of ordnance. He had hitherto possessed a robust and vigorous constitution, and a remarkable exemption from bodily infirmity. About twenty years since, while at work in the yard, he received a severe blow over the loins from an iron bar. Immediately after the accident he felt a desire to void urine, and upon making the effort, discharged a considerable quantity of this fluid mixed with blood. This was followed by severe pain in the region of the kidneys, attended with symptomatic fever; but after a few weeks' confinement, he was so far relieved as to return to his accustomed occupation. From this time he suffered more or less from weakness and stiffness of the loins, and from pain in the regions of the kidneys, ureters and bladder, which occasionally extended down the thighs to the knees, and when most severe was followed by a swelling of the testes.

About four years from the time of the accident, having suffered for some days from an attack of acute pain travelling down in the direction of the left ureter, he discovered in his urine a number of calculi, about the eighth of an inch in diameter, ragged and angular. From this time he was induced to inspect his urine as it was discharged, and to filtrate it, and found that it yielded from a half to a full teaspoon of calculi daily. For one or two years he preserved the calculi thus collected, placing the product of each day in an apartment by itself. Within a few days I have examined his cabinet of calculi, consisting of several hundred parcels, which he preserves as a curiosity, and values above all price. From the slight examination I made, I should judge that each parcel contained from twenty grains to two drachms. They were obtained by first filtrating the urine, and then washing the residuum in several waters, so that a considerable portion of the finer part of the concretions were washed away, as he told me, with the dregs.

This patient still continues to discharge about the same amount of calculi as formerly, and from the account which he gave me, and from the specimens in his possession, I should suppose that the kidneys must have elaborated not less than one drachm daily for the last fifteen years, amounting in all to a little more than *forty-five pounds*.

I have had no opportunity of ascertaining the chemical composition of this formation, as no analysis has been made; but judging from appearance, there is a difference in the constitution of the portions voided at different times, as they are somewhat various in color, as well as in texture and size.

For some years the habits of Catalano have been sedentary. He lives

mostly on vegetable food, with a small proportion of animal broth, and takes a few glasses of gin and water daily. He also drinks freely of melon and flaxseed tea, and also elm and other mucilaginous diuretic preparations. But the article from which he derives the most benefit, is the Harlem oil, which he takes in doses of twenty-five drops every other night. This medicine, he assures me, not only acts as a diuretic, but prevents the formation of calculi of large size, and that when he takes it the most freely the concretions are voided in the form of sand.

CASE XXIV. *Two hundred and sixteen calculi found after death, in the bladder of an old man.* By J. Kelly, M. D., of Esperance, New York. Boston Med. and Surg. Journal, 1852.

Mr. Joseph Gunn, of this county, 73 years of age, of a healthy and firm constitution in early life, at 50 began to complain of, and during the rest of life was more or less troubled with, gravel. He had one severe attack eleven years before his death, but afterwards, for five or six years, was quite free from any alarming symptoms of the disease.

Six years previous to his death, which took place in the summer of 1845, he had a very severe attack, a good deal of fever and inflammation of the bladder, and after this there was almost perfect inability of passing his urine without a catheter, which he was obliged to use very often night and day, for the remainder of his life.

Having been of industrious habits, he would busy himself in doing a little work in the garden and in the field, and would engage in reading and in conversing on the news of the day.

June 22, 1845, he sent for me to give him some relief, if possible, from his pain and agony; but at the same time, having a view to the benefit of others, he requested me to make a *post-mortem* examination of his body after his departure from this world, which to him, indeed, was now a world of woe.

I accordingly, as his death took place not long after, proceeded, eleven hours afterwards, in company with Dr. Silas O. Gleason, and Mr., now Dr. Andrew G. Riley, to attend to said examination.

There appeared, on external examination by the application of the hand to the region of the bladder, little doubt of a large accumulation of calculi. We could feel them distinctly, though I was not able to ascertain their exact number. The bladder we found much elongated and enlarged, reaching nearly to the umbilicus. The viscus was very much thickened, three or four times its natural thickness, and was adherent to the surrounding parts, excepting the upper part, and the adhesions were very strong. Owing to these adhesions it was extremely difficult to remove it from its location. We removed the urine, by the catheter, which was thick and of a white appearance, and very offensive, which had been the case about a week. The ureters were many times larger than natural. The left kidney was examined; it had nothing natural in its appearance. It was only a bag of filthy and most offensive liquid substance. The bladder internally showed an extremely enlarged state of its bloodvessels; its lower part exhibited a scirrhus or cancerous appearance. It also contained, as they were counted by Dr. Gleason, 216 calculi, which together with 12 which passed him before his death, made 228. They were of different sizes and shapes. The small ones, about half the number, are of a light mahogany color. The largest are of the appearance of a small cracker, of a smooth texture, and of marble aspect. The largest one is over an inch in diameter, half an inch thick in the centre, and weighs 111 grains. The internal part is not dense, but somewhat cellular.

The whole weighed about three ounces. They however nearly filled the bladder. I have now preserved them in a dry state about seven years, except a few which I gave to others. They are still sound, not crumbled or defaced.

In this case, the bladder being so much thickened, and the calculi taking up considerable space, shows us the probable reason for his being under the necessity of drawing his water very often. The adhesion being so great to all the surrounding parts, had an influence to prevent contraction of the bladder. This, it might be possible, would operate equally and as completely on the contractile power as paralysis of that viscus.

This man resided for about twenty-five years, and during the period of his ailments, in a limestone region, where the water is excessively impregnated with lime. What effect this might have had on his peculiar constitution is a matter of serious inquiry. Most probably the disposition to that peculiar diathesis might be hereditary.

CASE XXV. Over one thousand calculi successfully removed from the male bladder by lithotomy from an aged patient. By the late distinguished Philip Syng Physick, M. D., of Philadelphia, Pennsylvania.

The following, which is the crowning operation performed by Dr. Physick, is reported by Jacob Randolph, M. D. :—

In October, 1831, Dr. Physick performed the operation of lithotomy on Chief Justice Marshall. This case was attended with singular interest, in consequence of the exalted position of the patient, his advanced age, and the circumstance of there being upwards of one thousand calculi taken from his bladder. It is well known that for several years previous to this period, Dr. Physick had declined performing extensive surgical operations. He felt somewhat reluctant to operate upon Chief Justice Marshall, and offered to place the case in my hands. Taking all the circumstances into consideration, and knowing well that this would be the last time he would ever perform a similar operation, I felt desirous that he should finish with so distinguished an individual; and accordingly urged him to do it himself. Upon the day appointed, the doctor performed the operation with his usual skill and dexterity. I do not think I ever saw him display greater neatness than on that occasion. The result of the operation was complete success.

It will be readily admitted that, in consequence of Judge Marshall's very advanced age, the hazard attending the operation, however skilfully performed, was considerably increased. I consider it but an act of justice due to the memory of that great and good man to state, that in my opinion, his recovery was in a great degree owing to his extraordinary self-possession, and to the calm and philosophical views which he took of his case, and the various circumstances attending it.

It fell to my lot to make the necessary preparations. In the discharge of this duty, I visited him on the morning of the day fixed on for the operation two hours previously to that at which it was to be performed. Upon entering his room I found him eating his breakfast. He received me with a pleasant smile upon his countenance, and said, "Well, doctor, you find me taking breakfast, and I assure you I have had a good one. I thought it very probable that this might be my last chance, and therefore I was determined to enjoy it and eat heartily." I expressed the great pleasure which I felt at seeing him so cheerful, and said that I hoped all would soon be happily over. He replied to this, that he did not feel the least anxiety or uneasiness respecting the operation or its result. He said that he had not the slightest desire to live, laboring under the sufferings to which he was then subjected; that he was perfectly ready to take all the chances of an operation, and

he knew there were many against him; and that if he could be relieved by it he was willing to live out his appointed time; but if not, would rather die than hold existence accompanied with the pain and misery which he then endured.

After he had finished his breakfast I administered to him some medicine; he then inquired at what hour the operation would be performed. I mentioned the hour of eleven. He said, "Very well; do you wish me now for any other purpose, or may I lie down and go to sleep?" I was a good deal surprised at this question, but told him that if he could sleep it would be very desirable. He immediately placed himself upon the bed and fell into a profound sleep, and continued so until I was obliged to rouse him for the operation.

He exhibited the same fortitude, scarcely uttering a murmur throughout the whole procedure, which from the peculiar nature of his complaint, was necessarily tedious.

Chief Justice Marshall survived this operation some years, and finally died of a disease of an entirely different character.

CASE XXVI. *One hundred and seventeen calculi removed by lithotomy from the male perineum and bladder; recovery.* By Paul F. Eve, M. D. Southern Med. and Surg. Journal, 1849, N. S.

In the severe September gale of 1824, Mr. O'Bannon, then a lad of 18 years, was engaged at work upon a house which was blown down. In the fall he was struck upon the back by a piece of timber, and from the injury then received he dates his difficulty in urinating. During the twenty-four years he has been a sufferer, Mr. O'B. has fully tested the prescriptions of the *unprofessional* of several States, and he has travelled far and near in search of relief. He even became a sailor on the ocean; but all to no purpose, his disease continuing to harass him day and night.

For the past two years his difficulty to urinate became so great, that to discharge the urine at all, he had to assume the horizontal position, and then with the fingers introduced into the rectum, he pushed up the bladder. A large quantity of matter, he says, is also evacuated by the penis. When he sits upon the edge of a chair he experiences a sensation as of crushing (crepitation) a ball of snow in the perineum.

In December he entered the charitable institution under our Faculty, and a catheter was for the first time attempted to be introduced. This came at once in contact with a calculous mass in the perineum, where a tumor was found, projecting to the right of the raphé running back from the scrotum.

Operation.—On the 6th of last month (January) the following operation was performed in the presence of the Medical Class of our College—chloroform was administered by Dr. Means. After the patient was placed in the usual position for lithotomy, an incision, about three inches in length, was made over the tumor situated in the perineum, as for the lateral operation, except that it was upon the right instead of the left side. About 56 calculi were removed through this opening, and it was hoped the operation was completed; but upon introducing a female catheter through the wound into the bladder, a second collection of stones was readily detected in this receptacle. A grooved sound was now passed through the urethra, and the double lithotomy conducted by it into the bladder; the former was withdrawn and the bi-lateral section completed, by drawing the latter instrument out somewhat in the line of the external incision made in the skin. With the lithotomy forceps repeatedly introduced, by conducting it upon the finger, 61 stones were extracted from the bladder. Through the opening in the perineum a quantity of pus was discharged. During the operation, the rectum protruded

in a large mass so as to interfere with lowering the handle of the forceps, to seize the calculi in the bladder. The patient also had violent and involuntary contractions of the abdominal muscles, and during the latter stage of the operation the chloroform was discontinued. It lasted one hour. He was so reduced by his long suffering, a period of twenty-four years and four months, that after the operation I took him like a child in my arms and carried him up a flight of stairs to his room.

The following is the analysis of one of the calculi, kindly made by Professor Means, and addressed to me :—

“The urinary calculus, taken from the bladder of Mr. O’Bannon, has been subjected, at your request, to a chemical analysis, and merits at my hands the following description, viz :—

“*External form.*—The particular calculus under consideration is but a fair specimen, both in its physical properties and chemical constituents, of every other of the entire number removed from the perineum and cystic cavity of your recent patient, and which, by your courtesy, I was privileged to examine, both during and after the extraordinary operation. Being a solid, bounded by four oblique planes, it presents the *tetrahedral* shape distinctly; its solid angles and lateral edges, instead of being regularly truncated, and replaced by tangent planes, exhibit gently-rounded surfaces, which gradually blend with the respective faces, and are evidently the result of constant attrition, kept up for many years.

“*Physical characteristics.*—The exterior furnishes a beautifully smooth, and even polished surface. The *structure* is laminated with admirable parallelism—the respective tunics conforming to the external figure of the stone, and easily separable by the nail—the *fracture*, uneven, and the *powder*, harsh and gravelly under the touch.

“The predominant *color* is a grayish-white, which is frequently substituted, however, in the more deeply-seated laminæ, by a pale brown tint. Its *specific gravity* is 1.02.

“*Chemical constituents.*—I had anticipated the *uric acid calculus*, but the use of the blowpipe flame, and the application of appropriate acid and alkaline tests, soon revealed the presence of *phosphate of lime*, almost pure. This form of urinary concretion has been pronounced by Silliman, Gardner, and others, as very rare. It is peculiar, however, to the *prostate gland*, in the neighborhood of which the calculi, in your recent operation, were found to be imbedded, and which probably controlled the chemical affinities that subsequently deposited so large a mass in the fundus of the bladder. Its chemical elements are 3 atoms of phosphoric acid, 8 of lime, and 1 of basic water, as expressed in the following formula :— $8 \text{ CaO}, \text{HO} + 3 \text{ PO}_5$.

“The *fusible calculus* (phosphate of ammonia and magnesia) has, in one or two instances, reported in the *Philosophical Transactions* for 1809, been found in such quantity as nearly to fill the cavity of the bladder, but so large a mass of bone-earth calculi is surely a still more rare occurrence.

“The whole number extracted was 117, of which the largest weighed 3ij. and 38 grs.; the two next in size, each 78 grs., and the smallest 1 gr.—furnishing an aggregate weight of 3i℥ss.”

As usual with me, no dressing was applied to the wound, but the patient was requested to keep his knees together and to remain perfectly quiet. He took 40 drops of laudanum the night after the operation, and his diet was restricted to cold lemonade and flaxseed tea. He also omitted the medicines upon which he had been placed, viz., Peruvian bark and sulph. iron, with volatile alkali occasionally.

January 7. Had passed a pretty good night. Some urine had even been

already voided by the natural passage, notwithstanding the opening in the perineum. He has bathed himself in warm water; has now no fever, is quite cheerful, smokes his pipe, and has taken some soup, table tea, and an orange.

8th. Is doing well. Has had a good night—the best, he says, for years past. Uses a bed-pan to prevent soiling the clothes. Has sat up a little by the fire.

He has continued gradually to improve, notwithstanding the unfavorable state of the weather. No other application to the wound than Castile soap and warm water, several times daily.

On the 10th, four days after the operation, he changed his room. He experienced, the next day, some uneasiness in urinating, and had for a day or two slight diarrhœa.

On the 17th, the eleventh day since the operation, he was out in the yard walking about. By pressing the edges of the wound together, he could now pass nearly all the urine through the urethra.

On the 24th of January, *i. e.*, the 18th day after he was disembarrassed of his numerous calculi, Mr. O'Bannon returned home, a distance of 22 miles. The wound had nearly healed. He is to use, as a tonic, small doses of sulphs. quinine and iron.

A month after the operation, a special messenger reports him entirely well.

In noticing the peculiarities of this case, we remark—1st, the cause—an injury to the spinal column, probably by partial paralysis of the bladder, favoring a perversion of the function of this organ.

2d, The nature of the calculus—phosphate of lime or bone-earth. This, I believe, peculiar to disease of the bladder itself. Any calculus may have a coating of phosphate of lime, but when composed throughout of this combination, the evidence is strong, if not conclusive, that it originated in the bladder.

3d. The long existence of the disease without its character being detected.

4th. The size and shape of the calculi. They appeared both in the perineum and bladder to have been regularly impacted, one against the other. Occasionally two, but generally one only, was seized by the forceps in their extraction.

5th. The membranous portion of the urethra preserved its integrity, while the bulbous was ruptured by the stones. The two deposits, the one in the perineum and the other in the bladder, were about two inches apart.

6th. The calculi must have all had a common origin—there being no difference in their shape, color, or composition. Those in the bladder were, however, a little larger than those taken from the perineum. I agree with Prof. Means in the opinion, that they probably originated in the prostate gland, observing the laws of crystallization in their subsequent aggrandizement in the bladder and perineum.

7th. The remarkable fact that Mr. O'Bannon preserved his virile powers. His wife has borne several children, and is now actually seven months pregnant.

8th. The speedy recovery, under certainly, what must be considered quite unfavorable circumstances.

During 1854, I learned that Mr. O'B. was troubled again with symptoms of stone, and was anxious to visit me.

CASE XXVII. *Lithotripsy; impossible to withdraw the instrument; section of urethra; removal.* Lancet, 1837.

An accident has lately occurred in this hospital which calls to mind some of the circumstances which attended an operation performed a few years back

by a celebrated lithotritist in this capital. J. B. Mouchard, 57 years of age, without any profession, of good constitution, had experienced symptoms of calculus in the bladder, for about a year. The presence of a stone having been ascertained by sounding, the patient was received into the Hôtel Dieu on the 11th of January, 1837.

A few days afterwards, M. Roux commenced the operation of crushing the stone; at the first eight sittings everything passed off in a favorable manner, but on the ninth the operator, having seized a fragment of the calculus between the branches of the instrument, unfortunately resolved on attempting to extract it entire from the bladder. The instrument, thus charged, easily passed through the neck of the bladder, but stuck fast in the spongy part of the urethra; every attempt of the surgeon to disengage it only producing pain, without any hope of being able to withdraw the instrument, or push it back again into the bladder. Under these circumstances M. Roux decided on cutting down directly on the point of the instrument; this was executed in a few seconds with his usual dexterity. The fragment of stone was then disengaged from between the branches, and extracted, after which the surgeon found no difficulty in closing and withdrawing the instrument. The patient remained eight days longer in the hospital, but was dismissed at the end of that time, being unwilling to submit to any further attempts at breaking the fragments which remained.

This case gives rise to several considerations, which are of practical value. We may first ask, was M. Roux justified in attempting to withdraw the instrument, together with a portion of the stone? Certainly not. It requires but little practice in the performance of this operation to know that the instrument refuses to pass through the canal of the urethra unless perfectly closed, and hence, operators make it a fixed rule to clear the anterior branch by gentle strokes of a hammer, before they think of withdrawing it.

As to the result of the incision, the patient may possibly recover without the inconvenience of a urinary fistula; but this is a point upon which nothing certain can be said.

Professor Dieffenbach, of Berlin, is in the habit of mentioning a case in which an accident of a nearly similar nature occurred, but, fortunately, with a different result. A young surgeon who had spent some time in Paris, where, according to his own idea, he had made himself master of lithotrity, was allowed to perform that operation at the hospital. The manœuvre of crushing having been finished, he attempted to withdraw the instrument, but forgot to close the branches, and, accordingly, instead of disengaging it, actually drew the patient after him for a few paces along the floor. Fortunately for the poor man, the operator soon discovered his error.

CASE XVIII. *The lithotrite broken on a stone; great difficulty in withdrawing it.* *Lancet*, 1850.

In reading the account of a difficulty encountered and overcome by Mr. Guthrie, when performing the operation of lithotrity, at the York Hospital, with Civiale's three-bladed instrument (vide *Lancet* for June 15), I was reminded of a somewhat similar occurrence which I witnessed at the General Hospital, Vienna, on the 14th of January this year. A patient was presented at the second surgical clinique, on whom the above-mentioned operation was to be performed; but, of course, with an instrument of Weiss's model.

The stone was easily seized, by means of a screw lithotrite, and appeared to be partially broken; when, for some reason which I do not know, this instrument was withdrawn, and another substituted, with which the hammer was used instead of the screw. The stone was again seized, and the professor

hammered away perseveringly at it for a short time; the stone seemed to yield, and at length the graduated scale on the handle of the instrument indicated that the blades ought to be in contact, and the stone entirely crushed. An attempt was therefore made to withdraw the lithotrite; but, to the consternation of the operator and all the spectators, the more it was pulled the more it would not come. An examination was then made by the rectum, and, after some hesitation more force was employed, and the instrument drawn out of the bladder and along the urethra by main force. At the orifice of the urethra another dead stop occurred, the end of the canal was slit up with a bistoury, and the broken lithotrite removed. It was now found that the anterior blade had given way, the steel having partly cracked and partly bent just above the junction of the shaft and the blade. The distance between the extremities of the blades was, as nearly as I could estimate it, not less than three-quarters of an inch; adding to this the thickness of the blades, the extent from one side to the other would be not less than an inch. I should mention that, at the moment of extraction from the urethra, the blades separated with a sort of spring, showing the amount of pressure to which they had been subjected by the coats of the urethra.

There was some hemorrhage, but the amount I could not estimate, as the bladder was washed out immediately with tepid water; a catheter was then introduced, and left in the bladder. The next day there was considerable abdominal tenderness, and other inflammatory symptoms, which were combated by mercurials, warm fomentations, etc. The symptoms gradually subsided, and about the end of February the patient left the hospital in tolerable health, and, as I was informed by his dresser, without any symptoms of stricture, and with the intention of returning, after having had a change of air, for the purpose of having the stone removed by lithotomy.

This case is interesting as showing the extent to which the urethra may be distended without necessarily giving rise to stricture, as well as being a warning of the danger of employing a badly-tempered or ill-made lithotrite. In the case I have related, the instrument was weakened by having the anterior blade penetrated just at the junction of the shaft with the blade, and it was in this place that the yielding had occurred.

CASE XXIX. *Lithotomy during labor; recovery.* Lancet, 1849.

Dr. Monod related the following case at a late meeting of the Surgical Society of Paris: The patient, forty years of age, was pregnant for the first time, and had arrived at the natural term of gestation. After the evacuation of the liquor amnii, the labor did not progress, in spite of very sharp pains; and it soon became evident that the expulsion of the fœtus was prevented by a large tumor in the vagina, situated in its anterior wall. The tumor was hard; it closed almost completely the orifice of the vagina, and it was easy to perceive by the consistence, form, situation, and mobility of the swelling, that it was formed by stone lodged in the bladder. The diagnosis was rendered still more conclusive by the introduction of a catheter, which was, however, passed with great difficulty, owing to the displacement of the urethra. Dr. Monod introduced the index finger of his left hand under the tumor, with the pulp of the finger looking towards it, and gliding a common straight bistoury along this natural director, he made a vertical incision upon the tumor. This incision proved somewhat difficult, owing to the inequalities of the calculus. The hemorrhage was rather large, but soon stopped. The author then tried to seize the stone with forceps, but finally succeeded in removing it with his fingers only. The stone weighed *almost three ounces*, and was very hard. The patient had been placed under the influence of chloroform, and was de-

livered by the forceps while still in an anæsthetic state. The child was alive, but soon expired, the forceps, as it is feared, having pressed against a fold of the cord which surrounded the neck of the fetus. The woman has done very well; and five days after the operation, the urine was passing along the urethra, without any trickling through the wound.

CASE XXX. *Labor obstructed by a large calculus; ovariectomy; subsequent lithotomy; death.* Laneet, 1855.

A woman, 25 years old, was in labor with her first child, when the accoucheur found a large tumor obstructing the passage of the head, and he was compelled to perform craniotomy in order to effect delivery. On examination, the tumor was found to be a vesical calculus, which had never previously been detected or suspected, although the patient had suffered from childhood with irritability of the bladder. She was sent to Mr. Erichsen from the country three weeks after delivery. On examination a large calculus was found bulging the posterior wall of the bladder into the vagina. The parts were very tender. She suffered the most excruciating and constant agony, and wished that the stone might at once be removed. She was kept in the hospital for a few days, and then the calculus cut out through the vagina by the vesico-vaginal operation. The stone weighed *five ounces and a half*, and measured eight inches in the long and six in the short circumference. The patient went on well for about eight days, when she suddenly died exhausted. On *post-mortem* examination, extensive disease of the kidneys was found; the right was converted into a mere cyst, and the left was in a state of chronic pyelitis, with great dilatation of the ureter. There are interesting points in this case: the large size of the stone, obstructing parturition, an occurrence of which Mr. Erichsen had not been able to find another instance; and the absence of urgent symptoms until the parts were bruised by efforts of parturition.

CASE XXXI. *Case of suction of calculi from the bladder.*

A writer over the signature of G. H. in the September No., 1852, of the *Buffalo Medical Journal*, states, that he copies the following communication from a work published in London, 1743, entitled "A View of the Levant, &c., by Dr. Charles Perry."

"Being the other day in discourse with one Signior Gabrieli, a Venetian who has practised here as a Medico for many years, he entertained us with an account of a great cure which he had lately performed. His story was thus, or to this purpose: That a certain Effendi, a person of great affairs and consideration, and about fifty years old, had been tormented with violent and continued pains in his reins, for twelve years past, without intermission: that during this long and irksome time of twelve years' misery, he had applied himself to all the doctors (whether real or nominal), that he could meet with or hear of in this city, but without any sort of benefit; for they all alike mistook his case, judging it to be no other than a cold, which had determined and fixed itself upon that region. At length, about eight months ago, good luck or providence directed him to this Signior Gabrieli. He was no sooner called, and fully instructed of the patient's complaint, than he judged and pronounced it to be of the nephritic kind; but he judged much better of the disease than of the medicines he applied for the cure, for he gave nothing but mallow water in large quantity, with oils and syrups to lubricate. These, indeed, were very innocent remedies, and, as one would be apt to think, equally impotent, as in fact they proved. But Signior Gabrieli, having experienced those, and such like things, for a considerable time, without any fruit or effect, and being acquainted with an Arab, who was famed

for his dexterity in blowing wind up the penis for the cure of stone and gravel, he went in search of him, carried him to the patient, and ordered him to perform the operation without delay, in the best manner he could. The operator, having his instruments about him, went to work directly. He first ordered the patient to stand up in an erect posture; then he put the end of a common cane pipe (which was about three inches long, and cut tapering, after the manner of our penis syringes), into the urethra; and the instrument being adjusted in such a manner as he thought proper, he blew into it, with all his might, for a considerable time; then, holding the urethra, to prevent the wind's flying out again, he played about the bottom of his belly with the other hand (especially above the pubes and near the groins), for a considerable time; then, relieving the urethra, he let the wind discharge itself, beating his belly gently with his hand, to force the wind out with a greater impetus. When the wind was pretty well discharged, he applied a pipe again into the urethra, and then sucked with the same force as he had before blown. By this first operation the patient voided eleven stones near as big as vetches; and the same operation being repeated every morning and evening, till he was entirely freed from pain, and from all further emissions of stone or gravel, the whole quantity of stones discharged (besides an incredible quantity of gravel) amounted to near three teacupfuls; and besides these, he excreted a great deal of white viscous matter in his urine.

"However, we confess, we were rather pleased and diverted with this story, than satisfied about it; because people are generally partial in their own favor; or at least will exaggerate in their accounts of things which tend to their own glory and honor. We therefore desired Signior Gabrieli, for our full satisfaction and conviction, to carry us to see the person. Signior Gabrieli replied, without the least scruple or hesitation, that we were masters to go whenever we would; and no longer ago than yesterday, we went and had an interview with this Effendi. We saw the stones which he had voided, and had all the other circumstances of the cure confirmed by the patient's own mouth. Most of the stones are as big as vetches, and somewhat of the same figure; they are all of a dark yellow color, and of a friable texture. The Effendi told us that he had not been able to mount his horse, nor scarce to move about the house, for the space of twelve years before, but was now pretty well, and very easy. He said, however, that when he urinated, he had yet a burning pain in the urethra, near its extremity; and, examining his urine, we found it of a wheyish color, abounding with a number of white filaments.

Lithotomy in the horse; recovery with small urinary fistula. By W. Mogford. *Lancet*, 1828, vol. xiv.

The horse is the property of James Veal, Esq., near Hatherleigh, Devon. When taken up to be broke, he was found to be very restive, kicking off most of those who attempted to ride him; in consequence of this he received very rough usage; and has since been ridden rather hard. When Mr. Mogford was desired to attend him, he observed a peculiar stiffness in the movement of the hind legs; urine of a high color and pungent smell, and a dribbling of urine from the penis for some time after stabling; pulse between 70 and 80, and hard. By bleeding freely, clysters, fomenting and embrocating the loins, and a week's rest, he appeared sufficiently recovered to be sent to grass. He soon leaped over the gate of the field, and, crossing the country, got back to some pasture where he had been usually kept. This exertion caused a return of his complaint, and Mr. Mogford was again desired to attend him. He found him in the same state as before described. Wishing to examine the bladder, he introduced his hand into the rectum for that purpose,

and immediately felt a hard substance, which appeared to him to be a stone in the bladder. He communicated the circumstance to Mr. Fisher, surgeon, of Hatherleigh, who could not be persuaded that it was a stone, until he had made the examination himself, when he also felt it distinctly. Mr. Mogford then proceeded to the operation in the following manner:—

“Having drawn out the penis from the sheath, or prepuce, he passed a rod of whalebone up the urethra, until the end of it could be felt in the perineum. He then cut down upon the end of the rod, and through the opening thus made in the urethra he introduced a director, and with a probe-pointed bistoury continued the opening as far as the left side of the anus. He then introduced his right hand into the rectum, and the two forefingers of his left hand into the bladder, and, without any difficulty, pushed the stone against the middle finger, by which he guided it to the neck of the bladder, and then easily forced it out through the opening in the urethra. The stone weighed rather more than *four and a half ounces*. Some parts of the stone appeared to have been broken off and left in the bladder; these were easily removed by means of a piece of soft sponge tied to a whalebone probe, and some water. The wound quickly healed, except a small orifice, through which a part of the urine still passes; but the horse has worked hard since, and suffered no inconvenience from it. Mr. Mogford has no doubt that a stone of seven or eight ounces might be thus extracted.”

Lithotomy in a horse; a calculus weighing nearly twelve ounces successfully removed. Lancet, 1847.

Mr. Folks had been frequently called in to alleviate the sufferings of the animal; but being convinced that a calculus existed in the bladder, he requested permission of the owner to extract it; and having obtained his consent, the animal was removed to his infirmary, to be placed under preparatory treatment. On the operation being performed, a calculus was extracted, which weighed eleven ounces, four drachms, and two scruples. A watery solution of opium was injected into the bladder immediately after the operation, the edges of the incision in the perineum were drawn together by sutures, a free use of demulcents was subsequently had recourse to, and the patient never evinced one untoward symptom after the operation. He left the infirmary perfectly well within a month, and is now performing his usual work.

Lithotomy in a dog. Veterinarian—Lancet, 1843, vol. xlv.

A Newfoundland dog had been unwell for a long time, having no appetite, and being much emaciated. The urine was constantly dribbling away, and excoriating the thighs, and yet there was great difficulty in evacuating wholly the contents of the bladder, which, in a slight degree, were tinged with blood, and showed a calculous deposit. It was suspected by Mr. Mather (vet. surg.) of Edinburgh, that a calculus was present, and, having obtained permission, he determined to operate in consequence. The dog was properly secured with webbing, and placed in a fit position. A syringeful of tepid water was injected up the urethra, and a very small whalebone staff introduced along that canal into the bladder. This done, the curvature of the urethra in the perineum was cut down upon, and the staff then withdrawn. With a bistoury, Mr. Mather enlarged the opening already made, and next carried the incision to the pelvic portion of the urethra and neck of the bladder, the back of the bistoury being placed against the index-finger of the left hand, which was introduced as a director. Room sufficient was now obtained, and the forceps were accordingly introduced into the bladder, and a calculus seized at its long

axis, and drawn out after much difficulty, when it was seen to be of an oblong, flattened form, and as large as a duck's-egg! By means of a sound, several other small stones were felt, and immediately extracted. The parts were then cleansed with a little tepid water, and the dog was released from his situation, and made as comfortable as circumstances would admit. The loss of blood had been trifling in the operation, and no ligatures to vessels had been necessary; but the poor animal was much exhausted, and its constitution had been already so much weakened by disease, that the dog progressively sank and died the same evening. On examination after death, several more and smaller calculi were discovered in the bladder. The coats of that organ were a little thickened, and the ureters enlarged; but no damage seemed to have resulted to the surrounding parts during the operation.

SECTION X.

AFFECTIONS OF THE UNIMPREGNATED WOMB.

CASE I. *Strangulation of the posterior lip of the os tincæ within the aperture of a glass pessary; breaking the pessary without injury to the soft parts.* By G. Goodbrake, M. D., of Clinton, Illinois. North Western Medical and Surgical Journal, 1855.

About two years since I was called to see a Mrs. B., in consultation with my friend, Dr. Warner, and upon arriving at the bedside, we received from the lady the following history of her case:—

She informed us that she had suffered from ill health for some time, and that about five months previous to our visit, she had consulted a doctor, who informed her that she had prolapsus uteri, and that he could cure her without any difficulty by introducing an instrument into the vagina. The woman, anxious to get well, of course submitted to the introduction, and nothing more was done for the space of *five* months. At the end of this time she requested the doctor to remove it, as she did not receive any benefit, but, on the contrary, suffered a great deal of inconvenience from its use. The doctor then endeavored to remove it, but found, to his utter astonishment, that he was unable, as the woman said, to budge it. The doctor made several efforts from day to day, to remove it, but without success. He then informed the woman that she would have to make herself content until such time as he could procure a speculum, for the purpose of *seeing into* the nature of the difficulty.

But in the meantime the lady, as well as her husband, becoming very anxious to have the artificial obstruction removed, if possible, Dr. Warner and myself were called in.

Upon examination, we found the instrument in question to be a hollow glass pessary, in the form of a flattened globe, with an aperture through its shorter axis. Also that the posterior lip of the os tincæ had, from some cause or other, descended into the superior opening of the pessary, and had become strangulated. The pessary could very easily be made to rotate upon the neck of the strangulated portion, but all our efforts to remove it proved unsuccessful.

At length, after trying every other method we could think of, without success, I hit upon the following plan: I introduced two fingers over the pessary, one finger on either side of the strangulated portion, and pressed very gently but steadily downwards, and in the course of a few minutes, I was enabled, without much pain to the patient, to bring the pessary without the os externum. (I may as well state here that the strangulated portion inside the pessary had

enlarged to the size of a small hickory-nut, and that the balance of the pessary was filled up with a thick, dark, and very offensive fluid.)

I next procured a piece of soft buckskin, and cut a longitudinal slit in it, similar to a retractor; I placed this between the vulva of the patient and the pessary, so as completely to protect the external organs of generation, and also to prevent any of the glass from being drawn into the vagina. I then held a piece of metal beneath the pessary, and struck it a blow with a hammer, which broke it to pieces and allowed the womb to return to its proper position; and the patient was relieved from her very disagreeable condition. By remaining in the recumbent position, and using proper applications, by means of the female syringe, for about a week, the lady got along without any further trouble.

CASE II. *Extraction of a piece of wood from the unimpregnated uterus; recovery.* Medical Examiner, 1841, vol. iv.

A woman, of about 30 years of age, applied to the hospital of St. Louis, on account of a uterine affection. She related that she had become pregnant when 28 years of age, but had miscarried at the fifth month, and remained for upwards of three months afterwards in bed in consequence of inflammation of the uterus. She had sought relief at another hospital, but after a residence there of several months, was dismissed without being cured. She had a pale, sickly, unhealthy look; complained of indigestion, and of dull continued pain in the lumbar and hypogastric regions, and had an accession of hectic fever every evening. An irregular hard tumor filled the pelvis, and projected into the right iliac fossa. On examination with the aid of the speculum, the uterine orifice was seen half open, but the lips natural. Within the uterus was seen a white body, which, when touched with a stylet, gave a ligneous resistance, but permitted the instrument to be passed over it before and behind, yet appeared at its lateral extremities to be fixed in the coats of the uterus. M. Maisonneuve attempted to cut this body through with a pair of long scissors, that it might be more easily extracted, but could not effect it. He then seized it with a pair of polypus forceps, and by firm but gentle traction disengaged first one extremity and then the other. It was a peg of wood pointed at one extremity, and, as it were, twisted at the other.

M. Maisonneuve supposed that this piece of wood had been used for the purpose of producing abortion, but had become engaged in the parietes of the uterus after having effected its purpose; and subsequent inquiries confirmed this supposition.

The woman recovered, but the tumor still remained in the pelvis, probably the consequence of adhesions between the uterus, bladder, rectum, and some folds of intestine.

CASE III. *A large uterine calculus removed; recovery.* American Journal Med. Sciences, 1851.

Signora Filippa Spalluci, of Trani, aged eighty-six years, of sanguineous temperament and middle height, had always enjoyed rude health, nor had she ever suffered from calculous conerctions. In her youth, her frame was firm and muscular. She married when twenty-four years of age, and at thirty gave birth to a son. She became a widow at 60.

For four years she had been constantly afflicted with a sensation of great weight in the region of the uterus, pain in the back, extending to the thighs, and impeding their movements; leucorrhœal discharge; severe pruritus, and a burning sensation in the vulva; pain and uneasiness in the bladder, and dysuria, subsequently followed by incontinence of urine; which last symptom, from the

alkaline odor it occasioned, rendered her condition insupportable both to herself and those about her.

On the 7th of last January, the patient's sufferings were still further increased by the occurrence of partial prolapse of the uterus, and Professor D'Andrea was called in to see her. On examination with the finger, and afterwards with the sound, he satisfied himself that her case was one of uterine calculus, and, without loss of time, he proceeded to remove it. He made an incision, of about an inch in length, into the cervix uteri, at the left side, which was sufficient to permit the introduction of the forceps. Having seized the stone with the instrument, guided by the fingers in order to avoid including the soft parts, the operator found great resistance to his attempts to withdraw it; he therefore introduced the index finger of the right hand to ascertain the cause of the obstruction, and discovered that the portion of the calculus opposite to the fundus of the uterus was covered with a membrane. This it was, therefore, necessary to cut in a longitudinal direction, from above downwards, guiding the point of the bistoury with the left hand while operating with the right. He again seized the calculus with the forceps, and, with an oscillating motion, and the aid of pressure, he succeeded in extracting it. After the operation, fomentations of chamomile were applied. On visiting the patient next day, he found everything going on well; the portions of the membrane which enveloped the stone that remained adherent to the uterus were successively detached by a slow process of suppuration, and without any unfavorable consequences. In a few days the patient was convalescent.

The calculus was two and a half inches in length, and the circumference towards the larger extremity four inches; it weighed about *four and a half ounces*. Its shape was pyriform, the larger end being covered with a smooth layer, which extended to the middle of the concretion; while the remaining portion presented a granular appearance, and its tapering form clearly indicated where the false membrane had been attached. The calculus, from its appearance and dirty white color, seemed to be composed of urates and earthy phosphates; but an unwillingness to destroy it, as a pathological specimen, prevented its being subjected to chemical analysis. The foregoing case is remarkable for the great weight of the uterine calculus, and for the success which attended an operation performed on a woman eighty-six years of age. It may be well to add that, on the 20th of the following March, Professor D'Andrea was again called to visit the same patient; she then complained of severe pains in the labia, extending to the anus, and suffered from a copious bloody and ichorous discharge. On examination, extensive ulcerations, incrustated with earthy phosphates, were found in the affected parts.

SECTION XI.

EXCISION OF THE WOMB.

CASE I. *Extirpation of the uterus and ovaries for sarcomatous disease; recovery.* By Walter Burnham, M. D., Prof. of Surgery in the Worcester Med. College, Lowell, Massachusetts.

We find this case communicated to Nelson's *American Lancet*, January, 1854. We agree with the author that this operation was a most formidable one, and his patient had a very narrow escape from death. In the treatment of it we notice the entire omission of the condition of the bladder, while the rectum seems to have secured an unusual share of attention.

Miss Eliza Draine, aged 42, has had a tumor in the left iliac fossa, which has gradually been increasing for the past six years. After two years existing in this situation it occupied a more central position and seemed to be bilobed, although for a long time the pain and uneasiness were confined to the left iliac fossa. For five years after the discovery of the tumor the patient experienced but little inconvenience, and consequently resorted to no regular course of treatment. But during the last year the tumor increased rapidly, and at intervals was attended with very severe pain and nervous irritability; the paroxysms of pain increased in severity and duration until there was but slight intermission, and, indeed, it could not be said that she was at any time free from pain. Her strength also had failed, and there was much functional derangement of the pelvic viscera, owing to the pressure of the tumor upon the different organs.

I first saw her in May, 1853, and after a careful examination of the case, and obtaining from her the best history I could of its progress, I informed her that she could not be cured by any remedial plan of treatment, and that nothing short of the removal of the tumor could in any way be expected to benefit her, and even this course could not be adopted without placing her life in imminent danger. I recommended her to seek other professional advice, and also to consult her friends as to the propriety of running so great a risk. She called on me again about the 15th of June, and informed me of her determination to submit to the operation, which was performed on the 25th inst.

The tumor was quite movable, extending three inches above the umbilicus, and occupying mainly the left side, though it could be pushed to the opposite side without difficulty or pain. I could detect its division into three lobes, or that there were two distinct appendages to the main tumor, movable to a certain extent and independent of it; yet such was the form of the tumor, and the thickness of the abdominal parietes, that I could not possibly determine the exact relations they held towards each other. But from the fact that the tumor first appeared in the iliac fossa, and that the body of the tumor still maintained its position on the left side, I came to the conclusion that it was merely disease of the left ovary; but in this I was mistaken, as were several other professional friends who were with me, as also those who had examined the case in its earlier stages.

I was assisted in the operation by my brother, Dr. Z. P. Burnham, Dr. F. G. Kittredge, of Lowell, and Dr. S. C. Ames, of Boston. There were also present a large number of medical gentlemen. The patient was placed on the table and immediately brought under the influence of chloroform, administered by Dr. Ames. I now made the first incision through the linea alba down to the peritoneum from the umbilicus to the pubes. There was slight hemorrhage from the superficial vessels, which occasioned the delay of a few moments, but it was speedily checked by the cold wet sponge. The peritoneum was next pinched up with the forceps, and a small slit made so as to admit the director, upon which a straight-pointed bistoury was introduced, and the peritoneum divided first upwards and then downwards to the full extent of the external incision. I was now enabled to determine the nature and extent of the tumor, and found that its principal portion was attached by a small neck, of about one inch in diameter, to the fundus of the uterus, instead of being an enlargement of the ovary, as I had supposed; and also, that the uterus itself was implicated in the disease, occupying and filling the pelvis, literally, full. I also ascertained that the left ovary was enlarged to the size of a man's fist, and was of the same fibrous structure. To the right

ovarium was attached a cyst containing about six ounces of a dark sero-albuous fluid. The upper and main body of the tumor was of a size that it could not be turned out of the abdomen without enlarging the incision through the integuments; I therefore prolonged it to the left of the umbilicus upwards two inches. I could now by a little effort press the upper portion of the tumor outwards so as to admit of a free examination, when I perceived that the bloodvessels entering it were of very large size, and to guard against hemorrhage—as it was necessary to remove this portion before I could operate upon the remainder—I passed a double ligature around the neck of the tumor and as close as possible to the fundus uteri, and cut this portion of the tumor above the ligature. It was now deemed proper to remove that portion which involved the ovarium in order to have room to dissect around the neck of the uterus without danger of fatal hemorrhage. I therefore carefully dissected the left ovarian tumor, which was principally attached to the broad ligament of the uterus; the spermatic arteries were ligated previous to its removal. The next step was to lessen the size of the right ovarian tumor, and this was done by a free incision into the sac, and absorbing with a sponge the fluid it contained. I had now but the uterus in its enlarged condition to contend with; but so completely was it impacted in the pelvis that it was with the utmost difficulty its position could be altered to permit the completion of the operation. With great caution I at length removed all the attachments down to the cervix uteri, and this part not appearing to be implicated in the disease, was divided at the point where the vagina is reflected upon it. Two arteries—the uterine—only required ligatures. The right ovarian sac being removed, the parts were carefully washed and returned to their natural position in the abdominal cavity, the edges of the wound brought together and retained by four sutures and adhesive strips, which were carried quite across the abdomen to afford adequate support to the muscles. A compress of soft linen and a bandage completed the dressings. The patient was placed in bed, and as soon as she had recovered from the effects of the chloroform, I gave her *R. morphine gr. ½, ipecac. gr. j., gum acacia gr. iv.*, to be repeated every four hours.

June 26. Patient slept about half of the night; no pain in the abdomen; considerable thirst, which seemed to be the result of inhaling the chloroform, from its effects on the mucous membrane of the mouth and air-passages. 27th. Little change in the symptoms; pulse slightly increased in frequency; thirst; no pain or soreness; rested well all night. Treatment continued. 28th. Pulse 180; general increase of heat of the surface; some uneasiness of the bowels. Ordered an enema of infusion of senna, which produced two free evacuations. Continue the anodyne. 29th. Restless night; copious discharge of dark offensive matter from the wound and vagina; tenderness over the whole abdomen; pulse 150; tongue coated with a brown fur; skin dry and hot; excessive thirst; constant desire to change her position; abdomen distended with gas. To have an enema of senna and thoroughwort, with twenty drops of tincture of opium: this produced a free evacuation of offensive fecal matter, but it did not remove the flatulency. The anodyne to be given every two hours, and equal parts of spirits and water to be applied to the abdomen. 30th. No material change in the symptoms; night restless. Medicines continued, with the addition of two grains of scutellin to each powder. Quiet sleep followed.

July 1. Patient much worse; pulse 140; restless; constant vomiting and hiccough; bowels distended so as to tear open the adhesions, which had been firm for three days; suppuration abundant and offensive from the wound and vagina. Ordered an injection of senna, ginger, and forty drops of laudanum;

free evacuation, though no subsidence of the distention; alcohol applied to the abdomen, and the incision protected by adhesive plaster. The anodyne to be taken every four hours, adding to it 3 grs. of cypripedin. 2d. Still worse; pulse intermittent; vomiting every 15 minutes; cadaverous expression of countenance, and all the symptoms indicate rapid dissolution. Warm brandy and water, with charcoal, to be taken every ten minutes; continue the anodyne, and a fermenting poultice to be applied over the whole abdomen. 3d. Has passed a bad night; much exhausted; pulse 110, and regular; not quite so much distention of abdomen. Ordered two grains of podophyllin and ten of compound rhubarb powder in a little brandy, to be repeated in two hours, and followed by an injection of warm ginger. After the second powder and injection the patient had a copious evacuation of dark impacted scybala, which must have remained in the intestinal canal for many days, notwithstanding there had been, what seemed to be, free evacuations from the entire extent of the canal several times since the operation. Much prostration attended the evacuations, but the patient was kept from sinking by the free use of stimulants; and as soon as the operation was over, complete reaction and cessation of the vomiting ensued, the gas passed off, the abdomen became reduced to its natural size, the pain at once subsided, and a general improvement in all the symptoms became evident. 4th. Improving, slept well; pulse 104, regular and full; copious discharge of a dark-colored offensive pus; all the ligatures but one have become detached; no pain and but little soreness, to the touch. Ordered a generous diet, with an infusion of cinchona, and Dover's powder at night. 5th. Continues well; quinine in four-grain doses every hour in place of the cinchona, and the free use of brandy. 6th. Improving in every respect except in the amount and quality of the secretion, which discharges abundantly from the wound and vagina, and corrodes the skin wherever it comes in contact with it. The parts to be well washed with chloride of soda; a liberal diet of animal food. 7th. Rapidly improving; pulse 96; remaining ligature detached; removed an offensive slough from the omentum. Treatment continued. 8th. Pulse 100, sharp and small; mouth covered with aphthæ and the skin with petechiæ; sharp darting or pricking pains over the abdomen; diarrhœa and great prostration; edges of the wound are flabby and of a pale color. Ordered: quinine gr. xij., morphine gr. ij., to be divided into eight powders, one to be taken every four hours; and the mouth washed with nit. argenti gr. ij., tinct. myrrhæ ʒj., aq. ros. ʒij. 9th. Little alteration in the symptoms; bowels have moved freely; treatment continued, with the addition of sub-borate of soda for the mouth. 10th. Improving; mouth is cleansing; petechiæ disappearing from the surface; pulse 92; appetite improving; edges of the wound assume their natural color and elasticity; suppuration diminished in quantity and of a healthy character. Continue treatment, but the anodyne and tonic powders to be taken only once in eight hours. 12th. Rapid amelioration in all the symptoms; no discharge of pus from vagina and but little from the wound. 15th. Mouth cured; patient turns in bed without pain; wound nearly healed; bowels regular; appetite good; continue the quinine, but omit the other remedies. 20th. Sits up one hour at a time twice a day and gets up without assistance. Discontinue medicines. 30th. Wound completely closed; no discharge from the vagina; general health good; has taken no medicines for the last ten days; is gaining strength rapidly, and may now be considered out of danger.

This is the fourth operation I have performed within the last two years for the removal of ovarian tumors, all successful but one, which proved fatal on the third day after the operation. The first tumor weighed 12 pounds,

the second over 50 (unsuccessful), the third 24 pounds, and the fourth—the subject of this communication—8 pounds; yet this one, from its complications, proved much the more difficult, although it was the smallest of the four. Although this case terminated favorably, I would not easily be induced to make another attempt to extirpate the uterus and ovaries, or even to remove the uterus under almost any condition; and the operation should never be attempted without due consideration of the consequences of submitting a patient to such formidable risk.

CASE II. *Excision of the entire uterus for inversion; recovery.* By E. Geddings, M. D., Prof. of Surgery in the South Carolina Med. College. Charleston Med. Journal and Review, 1854.

On the 16th of May, 1854, I was requested by Dr. A. P. Pelzer, to meet him in consultation, in the case of a negro woman belonging to Mr. Robert White, in King street. On my arrival, Dr. Pelzer called my attention to a large pyriform tumor, equal in magnitude to a foetal head at the full term, which, proceeding from within the vagina, hung pendent between the thighs. This tumor was large and rounded below, but contracted into a rather thick pedicle above, which could be traced about three-fourths of an inch within the vulva, at which point its contour was surrounded by a kind of *cul-de-sac*, beyond which the finger could not be passed. Its whole surface was covered by a rough, thickened mucous membrane, abraded and ulcerated on many points, considerably inflamed, and disposed to bleed when roughly handled. In the general aspect, it bore a strong resemblance to a case of prolapsus of the uterus, of long standing, but the uniform roundness of the most dependent part, together with the absence of the os tincæ, served at once to convince us that it was of a totally different nature.

The first supposition that presented itself to my mind was, that it might be a case of prolapsus of the bladder, of such long duration that the walls of the organ had become very much thickened, and otherwise altered in texture. But on introducing the catheter, and passing my index finger around the neck of the tumor within the vulva, I was enabled readily to discover that it was a case of complete inversion, with extensive hypertrophy of the uterus, of ancient date. The orifice of the urethra was but little removed from its normal position, and in passing my finger up, on the posterior and lateral aspects of the neck of the tumor, as far as the reflected walls of the vagina would allow it to reach, I could distinctly discover the elastic feel imparted by the convolutions of the small intestines, which rested on the partially inverted walls of the vagina.

How long the inversion had existed could not be satisfactorily ascertained, but as there is reason to suspect that the accident must have occurred at the period of her last delivery, an approximate conclusion may be drawn from the fact, that her youngest child, a daughter, was present, and had the appearance of a person of from eighteen to twenty years of age. The report of the woman herself was, that she had been greatly annoyed by the tumor for many years, but had generally been enabled, by partially forcing it up into the vagina, and sustaining it there by means of a T bandage, to pursue her ordinary avocations. Latterly, it had increased so much in size as to render this impracticable, and at the period of our visit, any attempt at replacement, however partial, was productive of excruciating pain. She was, besides, suffering so much from engorgement and inflammation of the inverted organ; that, considering this, together with the partial and uncertain benefit likely to accrue from any merely palliative treatment, it became a serious question how we could most readily and efficiently relieve our patient.

Reflecting on all the circumstances of the case, it occurred to me that excision of the entire inverted organ presented a rational prospect of relieving, not only the present sufferings, but also the cause of much future annoyance. The vagina being also partially inverted, the danger of such an operation was materially diminished, inasmuch as we would, in consequence of that condition, be enabled to excise the entire mass by cutting through the vaginal walls, thus leaving the substance of the uterus untouched.

Dr. Pelzer concurring with me, I seized the neck of the tumor as high up as possible, between the thumb and index finger, and manipulating in such manner as to satisfy myself that it contained none of the convolutions of the intestines, I proceeded to include it in a strong ligature, for the twofold purpose of preventing the protrusion of the intestines, and obviating any serious hemorrhage. The neck of the tumor was then cut through, a little below the ligature, with a single sweep of a probe-pointed bistoury.

The operation was exceedingly simple and easy; was attended with no great pain; and, as may be supposed, was executed in a few seconds.

The after treatment presented no features of particular interest, and the case progressed so favorably, that after a few days, I was enabled to discontinue my visits, leaving the patient in the hands of Dr. Pelzer, who, in a short time, transferred her to Prof. Frost, the family physician, who, at the period of our attendance, was absent from the city. She speedily recovered, and, as I understand, has since done well.

On making a section of the tumor, it was found to present a solid, homogeneous, grayish-white mass, of a fibrous appearance. The whole cavity formed by the inversion of the walls had become obliterated by adhesions between the opposing peritoneal surfaces; but the point of junction between the vagina and the contour of the cervix could be distinctly recognized, the incision, as stated above, having passed through the walls of the vagina.

CASE III. *Extirpation of the uterus with the ovaria; recovery; the patient presenting her own womb in court, preserved in alcohol.* By Dr. Martin. New Orleans Med. and Surgical Journal, 1852.

Dr. Martin reports in a Bavarian journal, which has been copied in the *Gazette Médicale de Paris*, the following extraordinary case:—

Surgeon Z. was summoned to attend a female who had just been delivered of a child: after some time he attempted to extract the placenta, and in about a quarter of an hour he succeeded in extracting the entire uterus, with the ovaria. He was carried before the tribunal of Wassenbourg for trial. The woman, in the meantime, pending the trial, *perfectly recovered*, and assisted and gave her evidence at the trial. She preserved her uterus, with the ovaria, in a jar of alcohol, and produced them in court.

In conclusion, Dr. Martin adds: “*Quelque incroyable que paraisse ce cas, je puis répondre de sa veracité.*”

CASE IV. *A uterus in a state of malignant ulceration successfully removed.* By James Blundell, M. D., etc., of London. *Lancet*, 1827, vol. xiv.

Mrs. A. B., ætat. 50, with gray eyes, and tranquil disposition, broad in her make, and disposed to obesity, was seized with offensive discharge from the vagina, soon followed by eruptions of blood in large quantity, so that according to her own report, frequent faintings were produced, and the blood occasionally sank through a bed about twice as thick as a sofa-cushion, collecting on the floor; and day after day, for months together, with little intermission, one or two pints of blood were discharged.

Although Mrs. A. B., in her general conversation, is by no means prone to hyperbole, it seems evident that she must have greatly overrated the quantity of these daily floodings. Certain, however, it is, from her repeated and considerate declarations, that very large quantities of blood were lost, during a period of many months; and though, with the exception of slight œdema of the legs, there were no signs of general dropsy, the paleness, coldness, and weakness, and the frequent attacks of faintness or complete delirium, showed pretty clearly that much vascular inanition had been produced. In other particulars, the patient's condition was not altogether discouraging, for the bowels were regular, and the appetite was occasionally good, and the appearance, though cachectic and perfectly similar to that of other women perishing under malignant ulceration of the uterus, was not such as to indicate a constitution wholly unfit for surgical operation.

The woman having been under the care of three or four different practitioners before I saw her, I deemed it proper to examine immediately with great attention; when I found that the womb was movable, and about as large as a goose's-egg; that its mouth was broad, open, and of cartilaginous hardness; that it manifested the usual marks of malignant disorganization, in which also, about one-quarter of the contiguous vagina was involved; and further, that on the surface of this diseased mass, was formed an ulcer, about as broad as a shilling. The adjacent structures appeared to be healthy enough; the bladder and rectum were sound; the inguinal glands were not enlarged, whence it was presumed that the lumbar glands were perhaps healthy; the ovaries could not be felt to exceed their ordinary bulk, and there evidently was no tangible enlargement of the liver, spleen, kidneys, or omentum; all of which were examined with the nicest care. The breathing was easy; the pulse, various in its frequency, ranged between 115 and 120 in the minute; and the patient, though certainly very much debilitated, had sufficient remains of strength to walk to my house (the distance of a furlong), though not without considerable difficulty. To be short, it seemed clear at this time, that the case was ulcerated carcinoma of the uterus, as it is called, and that extirpation was the only remaining remedy.

The bowels having been cleared, and the patient being resolved to submit to the operation, on the 19th of February, 1828, I determined to remove the diseased parts without further delay. For this purpose, having placed the woman in the obstetric position usual in this country (on the left side, close upon the edge of the bed, with the loins posteriorly, the shoulders advanced, the knees and bosom approximated, and the abdomen directed a little downwards towards the bed), I began the operation.

First stage of the operation.—I commenced by passing the index and second fingers of the left hand to the line of union between the indurated and healthy portions of the vagina; the finger being converted into a cutting instrument (varying with the exigencies of the operation), by means of a movable knife, which requires a word or two of description. The blade of this knife, not unlike that of a dissecting scalpel, was mounted upon a long slender shank, which, including its large handle, was about eleven inches in length; and with this stem the blade was united, so that its flat, or plane, formed with the stem, an angle of 15 or 20 degrees. The first and second fingers of the left hand, then, being in the back of the vagina, contiguous to the diseased mass (as before observed), by taking the stem-knife in my right hand, I could at pleasure lay the flat of the blade upon the front of these fingers, and urge the point of the instrument a little beyond the tip. The apex of the forefinger being, in this manner, converted into a cutting point, by little and little I gradually worked my way through the back of the vagina towards the

front of the rectum, so as to enter the recto-vaginal portion of the peritoneal cavity, frequently withdrawing the stem-scalpel, so as to place the point within the tip of the finger; and then making examination with great nicety, in order to ascertain whether the vagina was completely perforated; minute care being necessary, in this part of the operation, to avoid wounding the front of the intestine.

Second stage of the operation.—A small aperture having been formed in this manner in the back of the vagina, through this opening the first joint of the forefinger was passed, so as to enlarge it a little by dilatation and slight laceration (safer than incision). This done, and a cutting edge being communicated to the finger, by placing the plane of the blade in such a manner that its incisory edge lay slightly advanced beyond the side of the finger now lying in the aperture, after drawing the point of the instrument within the tip of the finger, which operated as a guard, I proceeded to make an incision through the vagina transversely, that is, in a direction from hip to hip; for this purpose carrying the finger with its cutting edge from the opening in the vagina already made, to the root of the broad ligament on the left side, so as to make one large aperture. I then took a second stem-scalpel, formed on the same model as the preceding, with this difference, that the incisory edge lay on the other side of the blade, and laying this instrument on the forefinger as before, in such a manner, however, that the cutting edge lay forth on the other side of the finger (to the right of the pelvis, I mean), I carried the finger, thus armed, from the middle of the vagina, where the former incision commenced, to the root of the broad ligament on the right side; so that at the end of this, which was the second step of the operation, the diseased and healthy portions of the vagina behind became completely detached from each other by transverse incision, which stretched across the vagina, between the roots of the broad ligaments immediately below the diseased parts. At this time the intestines could be felt hanging about the tips of the fingers; but the blade of the scalpel lying on the finger, in which it was, as it were, imbedded, the risk of a wound, whether by point or edge, was completely prevented.

Third stage of the operation.—The back of the vagina, then, having been divided in this manner, I urged the whole of the left hand, not of large size, into the vaginal cavity, and the more easily, because the woman had borne children; afterwards, passing the first and second fingers through the transverse opening along the back of the uterus, this viscus, lying as usual, near the brim of the pelvis, with its mouth backwards, its fundus forwards, and a little elevated just above the symphysis pubis. This manœuvre premised, under full protection of these fingers now lying between the womb and the intestine, taking a double hook, mounted on a stem eleven inches long, I passed it into the abdominal cavity, through the transverse aperture, along the surface of the fingers already mentioned, and laying it in front of them near their tips, I converted these fingers into a sort of sentient tenaculum, which, with little pain to the patient, I pushed into the back of the womb near the fundus, and then drawing the womb downwards and backwards, towards the point of the os coccygis, as I carried the fingers upwards and forwards, I succeeded ultimately in placing the tips over the fundus in the manner of a blunt-hook; after which, by a movement of retroversion, the womb was very speedily brought downwards and backwards into the palm of the left hand, then lodging in the vagina, where, at this part of the operation, the diseased mass might be seen distinctly enough, lying just within the genital fissure.

Fourth stage of the operation—The process of removal being brought to this point, the diseased structure, still in the palm of my hand, remained in

connection with the sides of the pelvis, by means of the Fallopian tubes and broad ligaments, and with the bladder by means of the peritoneum, the front of the vagina, and interposed cellular web, parts which were easily divided, so as to liberate the mass to be removed. The broad ligaments were cut through, close upon the sides of the uterus; and, in dividing the vagina, great care was taken to keep clear of the neck of the bladder, and the ureters. This division of these attachments, and the removal of the diseased mass, constituted the fourth step of the operation. Some bits of indurated vagina, altogether not larger than the common bean, were left in the pelvis, to be removed at some future period, should symptoms require. This fact is worth recording.

To this circumstantial account of the operation may be added a few remarks. The intestines did not protrude. About an ounce of blood was lost, when the back of the vagina was divided; three or four more ounces following, when the vagina was cut in front. Ligatures, tenacula, and forceps, were in readiness to secure the vessels, but these were not required. The intestines were felt at one time only, namely, when two fingers were lying out through the opening in the vagina behind. Of course some pain was felt when the first incisions were making, and when, as in ordinary obstetric operations, the hand was urged into the vagina; but the principal distress was occasioned by drawing down the uterus, when the retroversion was accomplished, and the ligaments were put upon the stretch. The pains and complaints scarcely exceeded those observed in instrumental deliveries. The patient lay in the ordinary obstetric position, and required no restraint. The insertion of the hook into the back of the uterus did not occasion much suffering. The operation, from first to last, occupied about an hour, but much of this time was spent in reposing, and in considering what might best be done. With better instruments and greater activity, the whole operation might most probably be completed in five minutes. In obstetrics, however, celerity is considered to be in itself a secondary merit, and the operation was conducted on obstetric principles. The general range of the pulse was between 120 and 130, a frequency common in delivery by instruments.

When the last gush of blood was observed, the pulse became imperceptible in the wrist, returning, however, in the course of ten or fifteen minutes. A few ounces of spirit were administered to the patient as the operation proceeded. Throughout the process, the forefinger of the left hand was the principal instrument, and the scalpels and hooks were employed merely as the means of arming the finger for its various operations. The professional friends who favored me with their presence, were Dr. Elliotson, Mr. Callaway, Mr. B. Cooper, Mr. Key, and Mr. Morgan. An accident deprived me of the presence and assistance of my friend Dr. Roots. The operation was not undertaken at a venture, but in conformity with certain principles laid down in two papers read before the Medico-Chirurgical Society; the first of them in the year 1819, and the last in the year 1823. The latter, which was not published, contains the proposals for other abdominal operations. The fundamental principles of these operations, as there stated, are rested upon numerous observations made upon the human body, and a sufficient number of experiments upon brutes. Should the case here narrated come before the eyes of the public, I hope it may tend to diminish any unreasonable prejudices against experiments and experimenters. The feeling is respectable, but by the designing it may be misdirected. In Lisfrane's operation, I conceive there must be some misapprehension. I think I run no risk in saying, that by his method of procedure, as understood here, what the English accoucheur means by cancer of the uterus, must frequently be irremovable.

It is now five months since the parts were extirpated, and the patient is fat and well, and designs to return to her husband. The interception of the access to the ovaries is a complete security against extra-uterine impregnation. The head of the vagina is closed by the bladder, which lies upon it. The recovery was easy enough; but as the details may, perhaps, be deemed desirable, they shall be communicated at an early opportunity. The patient had been ill for eight or nine months before the operation was performed.

CASE V. *Expulsion of the inverted womb and its appendages soon after delivery; removal; recovery.* By J. C. Cooke, M.R.C.S.E. *Lancet*, 1835, vol. xxix.

At four o'clock, A. M., May 22, 1835, Mrs. Aston, midwife, of Coventry, was requested to attend a woman whom she found had already been in labor forty-eight hours, upon her knees, insisting upon being delivered in that position, according to the custom of her country, Ireland. When induced to lie on the bed, an examination of the parts showed the os tinea dilated to about the size of a half-crown; the child's head presenting as usual. Everything went on well, and the woman was delivered, at 7 o'clock the same evening, of a living child. The placenta followed whole in a quarter of an hour, being expelled by a pain. No hemorrhage ensued at the time, although a considerable quantity of blood was lost during the night. The after-pains were trifling, and she felt so well that she partook plentifully of animal food immediately after the midwife left.

At about four o'clock on Sunday morning, May 24th, Mrs. A. was hastily summoned, in consequence, as the messenger stated, of the appearance of another child. The woman had risen during the night, and had gone into an adjoining room to make water; when her screams alarmed her husband, who called in some of the neighbors, who found the woman seated on a stool before the fire, with a vessel of warm water in front of her, and a large substance, which they compared to a child's head and neck, lying between her thighs, supported by her hands. The hemorrhage had been profuse. The midwife found the woman on the bed, pale from loss of blood, and in considerable pain. The blood had even run on to the floor. The uterus was lying on the bed, loosely connected to the vagina by a shred of membrane only. It was removed without effort, and placed in a bowl. The hemorrhage then ceased, and next morning the midwife brought the substance to my father, who discovered, to his astonishment, that it was a uterus inverted. At 11 o'clock he visited the woman. She was completely exhausted, extremely restless, throwing her arms about; pulse scarcely perceptible. She had passed some urine shortly after the loss of the uterus, as also on the following morning. Her bowels had not been relieved for nine days before delivery, except of a mass of hardened fecal matter which was discharged with the last pain in the labor.

The woman did not much complain of any sensation like bearing-down, nor of any substance lying in the vagina, nor of suffering much pain; neither was there much distention of the abdomen, nor was there then or at any time during the progress of the case, anything more than a slight degree of tenderness, which, however, was hardly noticed, except upon pressure. It was apparent in the left lumbar region only. The only part of the uterus and its appendages not found in the bowl, was the left ovary. The uterus, on inspection, was a heavy, hollow, but firm pyriform body, very nearly as large as an ordinary child's head at term. No laceration was visible, except a slight rent in the posterior lip of the os uteri. The attachment of the placenta was distinctly marked, being of a deeper brown red than the remainder of the mass; a quantity of flocculent matter adhered, at its site, to the walls of the uterine

eavity. It was inserted over, and concealed the opening of, the left Fallopian tube. This orifice was easily discovered by detaching a small portion of the loose flocculent substance. The vessels were large and tortuous, and fully accounted for the great hemorrhage. Upon making a section along its anterior aspect, the broad ligaments, with both Fallopian tubes, and the right ovary, were discovered. The fimbriated extremities of the tubes were particularly clear and distinct; the left ovary appeared to have been detached, and to have remained *in situ*.

My father judged it prudent not to institute any examination per vaginam, fearing that any salutary union of the sides of the vagina might thus be retarded, and risk an ulterior prolapsus of the abdominal viscera. He enjoined perfect quietude and absolute restriction to the horizontal position, abstaining from active medicine, and ordering a light farinaceous diet.

May 25, Monday morning. The patient had risen during the night, and passed her urine freely. She had slept, and appeared as well as on the previous evening. Towards evening she passed several small scybala. She went on without accident, except some increase of tenderness of the side, and some degree of fever and diarrhœa on the 27th of May, which continued for three or four days, but which was then checked, and from that time she gradually regained her health and strength.

Previous to her confinement, milk was secreted in considerable quantity, but immediately after the loss of the uterus, this secretion, together with that of the lochia, was arrested; yet she persisted in applying the child to the breast, which induced considerable pain and hardness of the right mamma, attended with much febrile excitement. These symptoms subsided upon the exciting cause being removed. When her health had been in some degree re-established, she again gave the child the breast, and persevered in doing so during several weeks, until, finding that she had no milk, she finally desisted. During the febrile attack, the tongue at no time exhibited any approach to a furred state. She is now in tolerable health; her complexion is pale and sallow, as before, and she complains of a good deal of debility, but not such as to preclude her from following her usual occupation.

The child was for a long time in good health, but about a month since it was attacked by diarrhœa, and died.

CASE VI. *Mortification and entire separation of the uterus after a lingering labor; recovery.* Lancet, 1842, vol. xlv.

Mr. Darvill, at a late meeting of the Medical Society of London, related the following case: He was called on Sunday night, December 15, 1839, to Mrs. B., aged thirty-seven, pregnant for the first time. He found a little, spare woman, with a depressed and anxious countenance, and a quick, small, and weak pulse. She complained of pain in the loins, and believed that labor had commenced. On examination this was found to be the case. He was sent for again on Tuesday, the 17th, and he then found the orifice of the uterus dilated to the size of a shilling. The pains were confined to the back, and were very slight. She said that the child had kicked very strongly all day. On the 18th the os uteri was dilated to the size of a half-crown piece, the parts were lax, and there was plenty of room in the pelvis; there was still, however, pain only in the back, and so slight as scarcely to be called pain. In other respects she continued the same. He had so unfavorable an opinion of her that he told her husband he was doubtful whether she would do well. On the 19th the os uteri was dilated to the size of a crown piece, the pains slighter than yesterday; she complained of the child having moved very much in the night. The soft parts were moist and yielding. Four half-drachm doses of powdered ergot of rye, recent and good, were administered at inter-

vals of half an hour, with a little brandy and water, but no pain was produced, all she felt being a little bearing down. On the evening of this day the head of the child was found to have entered the pelvis.

20th. She was in the same condition, without any pain. The labor having advanced after taking the ergot the previous day, though no pain was produced, she again took two half-drachm doses of ergot, at intervals of twenty minutes, followed by beef-tea and ammonia. The bladder being distended, about half a pint of urine was removed by the catheter. In the evening the head was on the floor of the pelvis; he proposed to deliver with the forceps, but the husband objected to it. He could with ease pass his finger round the head, between it and the pelvic bones, and the soft parts were lax, and neither tender nor hot.

21st. Was called again at two o'clock this morning, and found her in every respect the same as over night. He again proposed to deliver by forceps, but this was not consented to, and at ten o'clock the head was still on the floor of the pelvis, the scalp protruding; she complained of great drowsiness. He was still not allowed to deliver with forceps. At two o'clock she was still in the same state, but at six o'clock he found that the head had passed without her being aware of it. With some difficulty he passed his finger under the chin, and applied powerful traction. At this time Mr. Crisp, who had been sent for by Mr. Darvill, arrived, and it took them about half an hour to deliver the body of a very large child, quite putrid, the cuticle peeling off when touched, and the abdomen quite tympanitic. As contraction of the uterus could not be produced, Mr. Crisp passed his hand into that organ, and peeled off the placenta, Mr. D. standing by to compress the uterus in case of hemorrhage; but no contraction or hemorrhage took place. The uterus fell much below its usual temperature; the placenta was putrid and very offensive. The hand was then passed carefully over the interior of the uterus to ascertain if anything remained, but nothing could be felt. A bandage and compress were then applied, brandy and water and ammonia given, and when she was removed to her permanent bed, an opiate draught. She slept until the middle of the next day (the 22d) being part of the time covered with a cold perspiration, and the pulse being almost imperceptible. When she awoke, she had beef-tea, and in the evening she felt quite easy, had a warm skin, and a gentle perspiration. She felt thirst, and took effervescing salines with excess of soda. Urine had passed.

23d. The countenance appeared less depressed; the skin rather hot; pulse 86, and a little sharp; the compress was removed; the abdomen was slightly tender; the uterus was about half contracted. There had been no discharge. Warm water was ordered to be injected into the vagina frequently. In the evening the tenderness had increased; pulse 92, sharp; abdomen slightly tympanitic; a slight swelling in the right iliac region, which was crepitant to the feel, and like air in the subcutaneous areolar tissue. Twelve leeches were applied, followed by hot bran poultices. A dose of castor oil in the morning. Beef-tea discontinued; gruel substituted.

24th. Countenance more cheerful; skin cooler; pulse 92, and softer; abdomen less tender; she had some sleep during the night. Continue the poultices.

25th. Pain and tenderness increased; pulse 120; she was lying on her back, with her thighs flexed on the abdomen. Eight leeches were applied, followed by bran poultices. Three grains of calomel and a quarter of a grain of opium were given every four hours. In three days the mouth became affected with the mercury; the abdomen became less tender; she could lie without pain on either side; pulse still 120; bowels regular.

From this date till the 2d of January, she continued much the same, hav-

ing nourishment and a pill of soap and opium at night. There had been a fetid smell, but no discharge from the vagina until to-day. There is now a discharge of fetid matter. An injection of chloride of lime was ordered to be applied frequently. On the 3d, a mortified substance, about three inches in length, protruded, with a spongy feel; slight traction was applied, but it was not movable.

6th. A substance, about a foot and a half in length, came away to-day. After this she felt more easy, but the urine passed by the vagina. The chloride of lime injection was continued for three or four days, until it produced a little pain, and a purulent discharge appeared. From this time she went on gradually improving, several small sloughy portions coming away for a day or two, with occasionally a little purulent discharge. The pulse remained weak for some time; bowels regular, and the feces passed by the natural passage. The woman recovered her strength, and looked fatter and better after a few weeks than Mr. Darvill had ever before seen her. He then made an examination, and found the vagina about two or three inches in length, ending in a *cul-de-sac*, without anything like a uterus to be felt. The vesicovaginal partition had disappeared, and he could pass three fingers into the bladder. So large was the aperture that the bladder partly everted itself, showing its mucous membrane.

In some conversation which followed the reading of this case, Mr. Crisp stated that after the removal of the placenta he was quite sure that the uterus was quite empty; the uterus felt quite cold and dead. The portion of uterus which had sloughed away was exhibited to the Society on the evening that the paper was read. It was of a very irregular shape, about a foot and a half in length, and six or seven inches in breadth. At one part was a distinct fibrous tumor. The preparation had been seen by Dr. Sharpey, and Messrs. Quain and Partridge, all of whom concurred in thinking that it was unquestionably the uterine structure. Had the ergot of rye any influence in producing this remarkable condition of the uterus, and its subsequent separation? It occasionally acts by producing local gangrene. Yet would not any such effect from this agent be preceded by its peculiar power of producing contraction of the uterus?

CASE VII. *Extirpation of the inverted uterus by ligature successfully performed.* By T. L. Gregson, Esq., Surgeon, of Newcastle-on-Tyne. *Lancet*, 1846.

Mrs. A—— had been delivered of her second child, by a surgeon, in a village, two years ago. As she complained of much pain and uncasiness, on the third day her medical attendant ordered her to get out of bed, and to walk smartly across the floor. She improved slowly, and complained much. About a year ago she came here, and was some months under the care of a surgeon. About six months ago I was called to attend her. I found her extremely emaciated and exsanguious, having for above a year been exhausted by most profuse hemorrhage at every monthly period. On examination, I found a pear-shaped body filling the vagina, the os tincæ embracing it firmly, and apparently adhering at one side. I gradually introduced my fingers, endeavoring to grasp it, and push it through the os tincæ. This procedure caused extreme pain and some hemorrhage, without its yielding in the least; it was of a purplish-red color. Feeling satisfied that it was an almost complete inversion, or, I might say, eversion, of the uterus, I endeavored, by chalybeates, etc., ergot, and astringents, to improve the system; but every monthly period produced extreme exhaustion, and death seemed inevitable. As a last chance, and with the consent of the patient herself and her friends, I resolved to extirpate the uterus. I went, accompanied by my friend, Mr.

Frost, a most able accoucheur, and who agreed with me, as she was so exhausted and exsanguious, that the attempt was justifiable. I laid hold of the tumor, and drew it as far down as possible; in so doing, the os tincæ entirely disappeared, leaving no doubt of the nature of the case. A very strong silk cord was then passed around it, and carried high up by the double canula, the cord being also passed through the eye of a strong curved steel staff.

I found this a very valuable means, as I could carry the ligature around the part with the greatest facility. The knot was then tied with great firmness, leaving the staff included in the ligature and opposite the knot; this instrument was secured to the inside of the thigh with a tape. By turning the handle once or twice round, the ligature could be tightened to any degree. This was done from day to day, and caused rapid sloughing of the part. It separated entirely on the ninth day. From the commencement of the operation to its coming away, reaction was very moderate. She required no treatment beyond an occasional anodyne, castor oil, and the catheter used twice. She gained strength rapidly. She was made to keep the recumbent posture twenty days. It is now three months since the operation. She goes about the house, and has walked out a little, feeling easy and comfortable.

Such cases being generally considered hopeless, I have detailed particulars, perhaps minutely. I believe the great point to be kept in view when the ligature is used, is to tie it with great firmness at once.

On examining the part, I find that the body and neck of the uterus are entirely removed. There has been no disturbance at the monthly periods, nor symptoms of the system feeling the want of the organ removed.

CASE VIII. Sequel of a case of extirpation of the uterus. By John Winsor, Esq., Surgeon, Manchester, England. *Lancet*, 1855.

This operation was performed, August 22, 1818; and an account of the case was communicated to the Royal Medical and Chirurgical Society, June 22, 1819, and printed in its transactions. The patient died from an accident Oct. 27, 1854, aged 68 years. She was 31 when the operation was performed. For the first ten years, she had irregular discharges of coagula at intervals varying from two to six months; these intervals gradually became much longer, and all discharge of blood ceased about the age of 50. The preparation shows well the os uteri apparently in its normal state; it is about half an inch in width. A probe, passed through it into the blind or closed cavity beyond, does not penetrate more than three-eighths of an inch. This, therefore, is all that remains of the cervix uteri, by the operation performed in 1818. The communication with the abdomen seems to have closed well. Under the abdominal aspect of the cervix, or opposite to the vaginal one, a sort of extended membranous or fleshy surface is seen, on which a portion, apparently, of one Fallopian tube, with its fimbriated extremity, can be traced; and near it is the appearance of an atrophied ovarium. On the opposite side are somewhat similar appearances of tube and ovarium. Both terminate in the membranous expansion near to the cervix uteri, each being about two inches in length. This case is rendered additionally interesting from the fact that the woman was four times the subject of strangulated hernia on the right side; that on the first occasion, no surgical treatment being permitted, the tumor sloughed on the eighth day, feces were discharged from the wound, and in six weeks the opening spontaneously closed. This occurred in 1840. In 1850, she was twice operated on, at intervals of six weeks; and in 1853—the fourth occasion—the hernia was returned by the taxis with some difficulty. Her death was the result of a severe injury to the head, occasioned by an accident while travelling.

CASE IX. *Gastrotomy and excision of part of an enlarged uterus; recovery.*

G. Kimball, M. D., of Lowell, Massachusetts, records in the *Boston Medical and Surgical Journal* for May, 1855, a successful case of extirpation of the uterus. In this account of the operation, which is copied entire, we find no description of the *organ* said to be extirpated, nor of the Fallopian tubes, ovaries, or round ligaments. Neither are we informed when the ligatures came away; eight months after their application, we learn that they could not yet be removed. Another fact, too, has struck us in the details of the case about these ligatures; they are referred to as producing irritation, causing considerable annoyance from mere local irritation, a good deal of discomfort, particularly in the exercise of riding and walking, and pain always followed the efforts to detach them; still their presence was looked upon as a mere *inconvenience*, and not implying any danger.

Doubting the possibility of removing the whole of the uterus by the operation performed in this case, we have given the above caption to it; admitting, as we do, the apology of the writer for the want of completeness in its details. We take occasion, too, to thank him for his candor in not withholding the fact that in two other instances of uterine operations, he lost his patients.

"In furnishing a report of this successful case of removal of a diseased uterus, I have to acknowledge myself embarrassed somewhat from the want of a more perfect statement of details than I have been able to procure. Such a statement has been promised me by the physician in attendance after the operation. It has, however, never yet come to hand, and in despair of ever receiving it, I am now under the necessity of furnishing a report much less complete than I could have desired, relying mainly, for the essential materials of it, upon statements and details gathered from the several notes received before the operation, and during the patient's recovery.

The following quotation I make from a letter received from the attending physician, Dr. A. Skinner, dated

VERNON, Ct., Aug. 16, 1853.

'DR. KIMBALL. Dear Sir: Mrs. T., of this town, some time since called my attention to a small tumor situated in the abdomen, on the left side, and as low down as the region occupied by the uterus. This struck me at first as being possibly of serious importance, and requiring special attention. Some few months passed on, and I consulted Prof. Knight, of New Haven, regarding the case. But he added nothing by way of explaining the real nature of the disease, nor did he propose any new treatment of it. Some months after, Dr. Knight was again consulted—still no improvement. Up to this time everything in the form of prescribed remedies has failed in retarding the growth of the tumor, till now it fills a large space in the abdomen.

No great inconvenience attends the size of the tumor, but the trouble is from hemorrhage during the period of menstruation. Every month a large quantity of blood is lost, reducing the patient extremely, and even hazarding her life. Now the question is, can this be a suitable case for the operation of ovariectomy? Is not the uterus implicated in the disease? The tumor is movable, and, I should think, no very firm attachments have formed. But whence this profuse hemorrhage, if not from the uterus? The patient is 34 years old, and at the commencement of the disease was in robust health.'

In reply to this statement, I could only remark that the account given of the case was characteristic of uterine, rather than ovarian disease; yet with this view even, I was not prepared to pronounce it altogether beyond the reach of remedy. On the contrary, rather than give up the case as utterly hopeless, I would propose, as a last resort, the removal of the uterus itself.

In accordance with this suggestion, I was requested to visit the patient at her residence. This I did on the 1st of September, 1853. The suspicions previously entertained regarding the nature of the disease in question, were now fully confirmed, as the facts of the case came to be better known by personal examination. The first aspect of the patient indicated, most unequivocally, an extreme case of anæmia. She lay in bed, upon her back, unable to sit up or turn upon her side without help. She had but just rallied from her last attack of hemorrhage, which had been frightfully severe. Another similar attack, if allowed to occur, was looked forward to as an event certain to be fatal. And in due course, this event was now liable to happen at any moment.

Upon examining the tumor, it was found, as had been previously stated, to occupy a very considerable space in the centre of the abdomen. Its form was globular; surface perfectly regular; movable from one side to the other; evidently unattached by adhesions; elastic, without the least sign of containing fluid, yet less solid in its feel than if it had been a more fleshy substance. Its diameter apparently about seven inches.

Examined per vaginam, the neck of the uterus was found in its natural condition, both in position and size. The os uteri open rather more than natural; a sound readily passed up some four or five inches. The enlarged and diseased portion of the organ could not be reached by the forefinger; the entire bulk of the tumor lay in the abdominal cavity.

Without knowing the actual state of the case, one would have judged, from the appearance of the abdomen, that it was a case of pregnancy six months advanced. No lesion, organic or functional, of any other organ, could be detected. Indeed, but for this one difficulty, there seemed no hindrance to the recovery and enjoyment of perfect health.

The important question was now raised, whether the case was one that promised any chance of relief by a surgical operation. The operation proposed was the removal of the uterus by section through the abdominal walls. Extraordinary and hazardous as this suggestion seemed, the feeling was unanimously and unhesitatingly expressed, by every one present at the consultation, that this procedure offered the only possible chance of saving the patient from impending death. This conclusion was no sooner made known to the patient, than it was readily assented to, both she and her husband claiming that a chance of life by an operation, however small that chance might be, was better than the certainty of a speedy death.

The patient was now put in readiness for the operation by being placed on a properly elevated table, and brought under the influence of chloroform. Upon exposing the abdomen, and observing the small size of the patient, it appeared quite evident that in order to dislodge the tumor entire, it would be necessary to extend an incision from the ensiform cartilage to the pubes. But rather than do this, it was thought better to expose a part only of the tumor, and see what could be done by way of enucleating the diseased portion of it, thus reducing its bulk so as to allow its being drawn out through a comparatively small opening. Accordingly, an incision was made through the linea alba directly over the most prominent portion of the tumor, exposing it to the extent of about four inches. Another cut of less extent, through the uterine walls, brought to view the fibrous mass within. Observing that no bleeding followed this procedure, this last incision was prolonged to an extent corresponding with that through the parietes. Through this opening, a portion of the diseased mass, thus exposed, was suddenly and forcibly extruded, seeming, at first, as if a little additional force would be sufficient to dislodge it entirely from its connections. Attachments, however, firmer and more extensive than had been anticipated, rendered this part of the operation rather

difficult; but being finally accomplished, and the uterus becoming at once greatly diminished in bulk, it was readily drawn out from the abdominal cavity, conformably with the plan adopted in the outset, and placed in the hands of an assistant.

A straight, double-armed needle was now passed through the organ in an antero-posterior direction, as low down as the supposed point of its junction with the neck, this part being, of course, left intact as regards its relation with the vagina. By this plan of appropriating to each lateral half a separate ligature, there was no great difficulty in making sure against all chances of subsequent hemorrhage; a consideration of great importance, in view of what might otherwise be very liable to happen.

The remaining part of the operation was very simple, and easily accomplished. It consisted of a mere amputation of the diseased structure by a single straight incision, carried across from one side to the other, and as near to the ligatures as was consistent with their secure attachment.

The parts having now been made as clean as possible, the edges of the wound through the parietes were brought together, and secured with four sutures. Adhesive strips, and a compress wet with warm water and laudanum, completed the dressing.

The operation was somewhat protracted, lasting nearly or quite forty minutes; yet it was not accompanied or followed by any extraordinary or alarming degree of exhaustion. The amount of blood lost did not exceed four ounces.

After being laid in bed, the patient was troubled with nausea, and occasional vomiting, which continued for two or three hours. This, however, was probably the effect of chloroform merely. Upon its ceasing, an urgent desire, without the ability to evacuate the bladder, came on, together with a severe pain in the lower part of the back. The first difficulty was readily relieved by the use of the catheter, the latter, by a half-grain dose of morphine, which seemed not only to quiet the pain, but to induce what was then considered a comfortable night's rest.

For the subsequent history of this case, I am obliged to quote from letters received from time to time from the attending physician, Dr. Skinner.

On Saturday, two days after the operation, he writes as follows: 'At 12 o'clock yesterday I was called to see our patient, and found her vomiting severely. Directed an enema of starch and laudanum, with counter-irritation over the stomach. This succeeded in checking the vomiting very soon. Spent the following night with her, and for the most part of the time she was quiet, and when disturbed at all, it was from nausea. Some fulness of the abdomen, with a little tenderness.'

'Tuesday, September 6 (sixth day). We find our patient this morning (8, A. M.), comparatively comfortable. Monday, there was much tympanites and tenderness of the abdomen. There had been considerable nausea the evening previous, and occasional vomiting. Two mild laxative enemata were given, but no evacuation of the bowels followed. Average pulse 116, and somewhat irregular.'

'Last evening another laxative enema was given; and a few hours after, still another. This last was soon followed by a good-looking movement. Since this, there has been less restlessness. Starch and laudanum injections have been duly kept up. Less flatulence, and with the exception of two paroxysms of vomiting (one since I commenced writing this morning) the symptoms are generally more favorable. Let me add, that during last night there was some fever, face flushed, pulse 125. This morning some pus appeared at the lower part of the incision.'

'Thursday morning, Sept. 15.—Our patient is still alive and rather com-

fortable. Nausea and vomiting have been the worst symptoms since operation. Bowels have not moved since last Thursday. Tympanites gradually improving. Pulse 100 to 120. Not much febrile action. We allow her a little very weak broth. We have succeeded in getting the full effect of opium by using laudanum injections—the only way opium could be tolerated.’

From the date of the above, till January following, accounts of regular improvement were received as often as once every two or three weeks. On the 12th of January, Dr. Skinner wrote as follows:—

‘Our patient remains much the same as when I last wrote. She is able to walk about the house, and looks nearly well. Countenance good; pulse strong; appetite good enough; bowels free; in short, everything about her right, except what is produced by the irritation from the ligatures.’

March 1, six months after the operation, another communication was received, in which the ligatures are again alluded to as still attached, and causing considerable annoyance from mere local irritation. Again directions were given to apply still more force. This was promptly done; yet the ligatures remained firm.

Early in May following, I visited my patient at her residence, and found, as her physician had previously stated, ‘everything all right, except the irritation produced by the ligatures.’ Her personal appearance had so changed that I could hardly believe her to be the identical person I had operated on eight months previously. The recovery of flesh and strength, the healthy, florid color of the cheeks, good appetite and perfect digestion, all indicated the return of robust health.

The ligatures, however, still remained an annoyance, producing a good deal of discomfort, particularly in the exercise of riding and walking. Another attempt to remove them was again unsuccessful, and from the pain that always followed these efforts, it was thought advisable rather to allow them to remain attached for an indefinite time longer, than to subject the patient to repeated failures. This conclusion seemed reasonable and safe, from the fact that their presence was looked upon as a mere inconvenience, and not implying any danger.

This visit, as stated above, was made early in May, eight months subsequent to the operation. From that time to the present, my further knowledge of the case has been only of an indirect character, yet quite satisfactory. From several individuals coming from the immediate neighborhood of the patient (one of them recently), I learn that the operation is spoken of as perfectly successful, and the patient herself restored to health.”

CASE X. *Inversion and abstraction of the uterus after delivery; death.*
Med. Examiner, 1839, vol. ii.

On the 7th of April, 1839, at the request of Ira B. Wheeler, Esq., coroner, I examined the body of Mrs. Cozins, the wife of a respectable mechanic, No. 328 Madison Street, at the time absent from the city. I was assisted in the examination by Dr. S. C. Ellis, in the presence of Drs. Nichols, Lobstein, and Walters. Before the examination, we obtained the following history:—Mrs. C. was delivered of a healthy, living child, about one A. M., without any other assistance than that of her sister and a female friend, both married, and the former a mother. The cord was tied and cut *secundum artem*; but the placenta was retained beyond the usual time. Three hours having elapsed without its disengagement, the sister went for a physician, and obtained the services of Septimus Hunter, who represented himself to be a physician, but was at the time a clerk in a drug store. Upon his arrival, he immediately

addressed himself to the task of the removal of the placenta, the successive stages of which operation will be mentioned presently.

We were shown, prior to the dissection, a mass of fleshy substance in a washbowl, which I at once recognized as a uterus; also, in another vessel, the placenta was shown us, which was entire, but without a vestige of the umbilical cord attached to it. The latter was subsequently discovered in a pail of dirty water.

On stripping the body, the abdomen was found very sunken. The usual incisions were made, and the following uncommon appearances were presented: 1st. A total absence of the uterus. 2d. The broad ligaments much torn and ragged, and partly deficient. One Fallopian tube was absent, but both ovaria remained *in situ*. 3d. The upper extremity of the vagina was open and free, so that the hand introduced from without would pass directly into the cavity of the abdomen, and the intestines could be touched. The intestines were high up, as left by the contracting uterus. 4th. A considerable quantity of extravasated blood was seen on each side near the ovaria, forming spots of ecchymosis beneath the membranes. No effused blood was seen, however, within the abdomen, except this. 5th. A laceration of the vagina, about an inch and a half in length, a short distance from its superior extremity.

By reverting to the uterus, we found the deficient parts attached to it, viz., one Fallopian tube, entire; a portion of the broad ligaments, and about an inch of the upper end of the vagina, which had been divided by an even circle, though manifestly without the aid of any cutting instrument. The external surface of the uterus was about half denuded of its peritoneal coat, leaving the muscular fibres entirely bare. Its internal surface was smooth, and the part where the placenta had been attached very apparent, presenting a slight brown color. The whole organ was about the size of a child's head at birth. Large quantities of coagula were about the body; the bedding was thoroughly soaked with blood, and a large puddle of it, of a bright red color, covered the floor beneath the bed.

The examination of an intelligent female witness before the coroner's jury, developed the following facts: Immediately after the *quasi* doctor arrived, he took hold of the cord, and making strong traction upon it, he completely inverted the uterus, the placenta still adhering; pulling still harder, he severed the cord from its attachment and gave it to the witness. He then took hold of the placenta, removed it, and laid it aside, saying there was more to come away still. He then grasped the uterus of the unfortunate patient, and by dint of "excessive" pulling, after about three-quarters of an hour (during which period he relaxed his efforts occasionally to rest and remove his coat, the miserable patient constantly uttering the most piercing and heart-rending cries, such as "you are tearing my heart out," etc.) he succeeded in dragging the uterus from its attachments, and separated it from the body, holding it in his hands, and exhibiting it as a proof of his prowess and skill, saying that "he never had met with such an extraordinary case before." When asked what it was, he replied "either a polypus or a false conception." During this brutal operation, the groans of the suffering woman were at first strong and loud; these, together with the force which the man was seen to use, excited the alarm of the attendants, who urged him to desist, and allow other medical advice to be called; but with incredible hardihood he persevered, insisting that all was right, that she must endeavor to be patient, and that *he would be responsible for her life*. Towards the close of the performance, her cries became more and more faint, and at length entirely ceased. He thought she was endeavoring to support

the pain with patience, and encouraged her in so doing by words. When he turned to look after her, and to feel her pulse, he found that she was dead.

It is due to the profession to say, that the performer of this horrible tragedy is not, *de jure*, a member of the profession, though he asserts that he has a *recommendation* from three surgeons of the British Navy, of his medical proficiency, and that he has had a large amount (three hundred cases) of obstetric practice. He appears to be about thirty-two or thirty-three years of age, and has been in this country two years.

CASE XI. *Successful extirpation of the inverted uterus with a polypus, in a girl seventeen years old.* By Dr. C. H. Higgins. Braithwaite's Retrospect, 1850.

Dr. Higgins's patient was a maid-servant, 17 years of age, who was unmarried, and had never been pregnant. The catamenia had appeared for the first time about six months previously, the discharge lasting three or four days. At the next period the discharge was very profuse, and she attended for about three months at the Taunton and Somerset Hospital, as an out-patient, for menorrhagia. At the end of that time the sanguineous discharge ceased to be constant, but during its intervals she had a fetid leucorrhœal discharge. The further progress of the case is thus stated:—

"By her own account she continued in this improved condition, capable of attending to the duties of her situation, until about three weeks since. At this time, however (early part of April, 1843), she experienced a most severe menstrual period, attended with very violent and continuous bearing down pains in the natural situation of the womb, and in the back; which, from her description, clearly resembled those that characterize the expulsive efforts of the uterus during the latter stage of labor. These, according to her, tremendous pains, persisted for some hours, and then suddenly ceased, and she immediately discovered a large substance filling up the vagina, and projecting beyond the labia. She suffered greatly from dragging pain, and in the course of a day or two a considerable fetid sanguineous discharge came on, and she became too ill and depressed for her menial duties. She was now seen by the usual medical attendant of the family, under whose care she remained for some days, and at whose suggestion she was at length sent into the hospital, and placed under my care on the 20th of April, 1843.

I saw the patient, for the first time, on the day of her reception, and found her with a countenance expressive of great depression and suffering. The pulse very low, but quiet and regular. The usual excretions were said to be performed naturally, and her appetite was tolerably good. She chiefly complained of unceasing pain of a *dragging* character at the lower part of the abdomen and back, and consequent complete loss of rest. Upon examination, in the presence of two or three of my colleagues, there was found, occupying the vagina, and protruding beyond the external genital fissure, an irregularly-shaped mass, about the size of an adult human heart, and consisting of two distinct, but connected portions—a firm fleshy substance of pyramidal form, covered at its base by a nodular fungoid-looking insensible growth of a spongy consistence—somewhat resembling the cauliflower excrescence of Dr. Joseph Clarke.

The growth, here and there, presented a broken-down and ulcerated appearance, giving out a copious fetid and bloody discharge. Upon more closely investigating the nature of the connection which existed between these two apparently dissimilar portions of the tumor, a firm tough pedicle, half an inch in diameter, and somewhat less than this in length, was perceived to arise from the centre of the former body, and to lose itself in the other

mass; of which mass the greater portion merely overlaid its more solid neighbor, as if it had been flattened and pressed out upon it.

The opinion formed of the case at this stage of the examination was that a double fibrous polypus had been generated in the cavity of the uterus, and extruded by a sort of slow labor, at a menstrual period, when the womb would be more disposed to take on such an excited action; and that the more distant half of the tumor had become decomposed and broken down by exposure to the air and friction. In order, however, to arrive at a more precise diagnosis of the case, I proposed to remove the looser and broken portion at once, as it was clear that the true nature of the ailment could only be determined by a more intimate examination of the solid part of the mass, which was at present obscured to a considerable extent by the other. It was easily lifted up and scraped away with the handle of a scalpel, until the pedicle was reached. This being of a firm fibrous structure, required to be divided. The whole being in this way got rid of, the now denuded fleshy body was seen to be a uniform reddish, pyramidal substance, somewhat flattened from before backwards, about the size of a turkey's-egg, firm to the touch, very sensitive, and having its narrow end high up in the vagina. The surface was roughish, and bathed in a fetid bloody secretion, with here and there a slight abrasion, within the area of which might be seen traces of fibres, resembling muscular fibre. Upon making a vaginal examination, I discovered, instead of a dilated os and cervix uteri, as was anticipated, at about three or four inches up the passage, a complete *cul-de-sac*, and immediately below this, a prominent ridge or thickening, encircling the apex of the tumor. These unlooked-for signs, taken in conjunction with the roughness of the surface, presenting so marked a contrast to the usually smooth and almost polished appearance of a polypus, and the absence of everything like a uterine mass above the pubes, together with the history of the case, satisfied me that we had to deal with something more serious than was at first conjectured. That, however unlikely *a priori*, the case was in fact one of those rare instances in which a polypus connected by a short pedicle with the internal fundus of the uterus had been suddenly expelled, and, dragging down with itself the organ, had caused it to undergo complete inversion; and that the broken-down mass, which I had removed in the early part of my examination, was indeed the polypus—the original cause of all this mischief—and which, as far as one could judge from its present condition, was of about the same size as the displaced uterus.

Some doubts, however, of the correctness of my opinion being expressed by those around me, from the improbability of such an occurrence as inversion from polypus in a person of the youth and character of my patient, she being a virgin, as well as from the extreme difficulty of accurately distinguishing between inversion and polypus, I proposed to search for the originally internal orifices of the Fallopian tubes, which, if my judgment of the case were correct, should be found on the surface of the tumor. These I was fortunate enough to hit upon, and having inserted into each of them a common bristle to the depth of two or three inches, I succeeded in gaining over my less hasty colleagues to my own view of the case.

During these various and long-continued manipulations, from which the patient appeared to suffer very little, about six or seven ounces of blood were lost, but chiefly during the removal of the polypoid mass."

For some time afterwards the patient was kept in a recumbent posture, and appropriate local and constitutional treatment adopted; but, the exposed fundus uteri assumed an inflamed and excoriated condition, and the patient's health began to fail so rapidly, that it was determined, as the

only resource, to extirpate the womb. Dr. Higgins thus describes the operation :—

“The patient, having been previously prepared by a small dose of oil over night, and an enema early on the following morning, was brought into the theatre on the fifth of May, 1843, and placed in the position adopted for lithotomy (but without being tied). The labia being held aside by two of my colleagues, and traction downwards and outwards made on the uterus, I passed, by means of a double canula (or rather a modification of this instrument, the two parts of which could be separated or brought together at will), a tape band half an inch wide, as high up on the inverted portion of the vagina as possible, both as a precaution against hemorrhage, and also to give me a command over the divided vagina afterwards; and having tightened this band somewhat, I excised, with a common scalpel, guarded to within an inch of its extremity, the entire uterus, close to the tape band, and through the portion of the vagina immediately beyond the cervix. The excision was easily accomplished, and could not have occupied many seconds, and there was scarcely any hemorrhage. A double-bladed speculum being now introduced into the vagina, I passed three silk sutures through the entire substance of this part, at some little distance from its cut edge, on two opposite sides, and brought it into accurate apposition, as I should have done in an ordinary incised wound, so as to procure, if possible, adhesion by “the first intention,” an anticipation in which I was not ultimately disappointed. I now ventured to slacken the tape band slightly, but a flow of blood instantly taking place, I retightened it, and at once arrested it. Having satisfied myself that the band was not applied so tightly as to endanger sloughing, in fact that it was acting simply as a tourniquet, I left it there, fastening the projecting end of the double canula against one of the thighs; and having filled up the vagina with a sponge moistened in cold water, the patient was replaced in bed. She bore the operation well, but subsequently complained sadly of the pain and distress it had cost her. When visited soon after the operation she was extremely depressed, and appeared to suffer greatly from abdominal and lumbar pains, for which she was ordered a full dose of laudanum in some wine, and perfect quiet enjoined.”

The subsequent treatment of the case it is unnecessary here to detail. The following is the report given by Dr. Higgins:—

“May 11. Much improved in all respects. The appetite becoming natural. From this date the patient continued steadily, and without drawback, to gain strength; and at the end of two months left the hospital quite restored to health, and free from discharge. The vagina appeared about three inches long, and was closed by a complete *cul-de-sac*—a small ridge or line of cicatrix running through its middle. The wound of the vagina had completely healed at the end of a week.

I have had frequent opportunities of seeing and examining my poor patient since her removal from the hospital. On the 19th of February, 1844, she came to see me, having walked a distance of three miles in about an hour; she was not at all fatigued, and she intended walking back again. She stated that she was, and had been, quite well, and should not, from her own feelings, know that anything unusual had occurred in her, except that she did not menstruate. She was very cheerful and grateful for her recovery. On the 29th of July I again saw her; she was looking exceedingly well and cheerful. She told me she had never experienced the slightest discomfort, except periodical pains in the loins once a month, which lasted two or three days; but she had never had any sort of discharge, which could be regarded as vicarious menstruation. I have frequently seen her during the last three years. The

last time I did so was at a friend's house, where she was living in the capacity of nurse-maid. This was in May or June, 1848, five years from the date of the operation; and she was quite well, and had never ailed in the slightest degree. She stated that she had not experienced the periodical lumbar pains so often of late.

CASE XII. *Excision of the uterus successfully performed; subsequent death from return of disease.* By Paul F. Eve, M. D. American Journal Medical Sciences, 1850.

This case was presented to the profession by my preceptor, Dr. Meigs, who had two drawings taken to represent the organ removed. He says:—

"I do not know that any American surgeon has heretofore extirpated the entire uterus *in situ*—an operation that is said to have been first performed by M. Sauter, of Constance, in 1822.

"M. Colombat de l'Isère informs us that the operation has been executed by Sauter, by Hoelscher, twice by Siebold, and thrice by Langenbeck; four times by Blundell; once by Bauner; once by M. Lizars; twice by Récamier; once by Dubled; twice by Roux, and once by M. Delpech; while this operation by Professor Eve adds one integer to the whole number, which amounts to twenty operations, in all of which the result was contrary to the hopes of the surgeons.

"M. Colombat expresses the opinion that operations for the removal of the womb *in situ* ought not to be in future performed, in consequence of the disastrous summing up of the statistical records. He does not apply his objections to the cases of incurable inversion of the organ.

"There are too many examples of recovery after extirpation of the inverted organ to leave any doubt on the mind as to the hopefulness of such an operation. Still, as I have firm confidence in the opinions I have published in other places as to the power of spontaneous cure of *inversio uteri*, I should hesitate long before resorting to the measure of extirpation. In my friend's operation, there is cause to congratulate him upon the skill and resolution manifested by him, and upon the very hopeful success up to a certain point.

"The following extract, from Prof. Eve's communication, will show that, but for the recommencement of the original heterologue development in the vagina, the patient had, in the most remarkable manner, been rescued from death.

"I send you herewith an extract of a letter from Prof. P. F. Eve; also, a letter from Dr. J. A. Eve; and, lastly, extracts from two letters from the surgeon.

"Very respectfully, your obedient servant,

CH. D. MEIGS."

"On the 16th of April last, I removed the entire womb from a patient, who has recovered. The operation was performed at my surgical infirmary, in which I was assisted by my cousin, Dr. J. A. Eve, Professor of Obstetrics and Diseases of Women and Infants, and by Drs. Murray, H. Campbell, Longstreet, and Montgomery, and in the presence of several others connected with the profession.

"The patient is a negro woman, twenty-eight years of age, has been married, but never conceived, as she believes. For more than three years, she has been laboring under uterine affection; at least, she has been annoyed for about that length of time by a vaginal discharge. The history of diseases among our negro population is generally very imperfect and unsatisfactory; and this is especially true as regards uterine derangements. All we can obtain, in the present case, is that the patient experienced great irregularity in menstruation, and had frequent hemorrhages from the vagina."

"Yours, &c.,

P. F. EVE."

We now refer to Dr. J. A. Eve's statement of the case, as he observed it before she arrived at the infirmary in Augusta.

"AUGUSTA, April 24, 1850.

"Early on the morning of the 10th instant, I was called to visit Mary, the patient whose womb you extirpated on the 16th, in consultation with Drs. Murray and Cook, some eleven or twelve miles from town.

"Under the influence of morphine, which had been given before my arrival, the patient had become easy. On examination, I found a tumor of considerable size in the hypogastrium, and the whole pelvis, to the outlet, filled and blocked up with a lobulated, convoluted, incomprehensible mass, from which issued a copious and horribly fetid discharge.

"As this was unquestionably carcinoma, cauliflower excrecence, encephaloid tumor, or some malignant growth, the patient's certain doom was death, after a few months, or at most a year, of miserable existence worse than death, unless rescued by surgery, in the performance of a heroic operation which would involve the removal of a portion or the whole of the uterus.

"If such an operation would ever be indicated or warranted, the age (twenty-eight years), the vigor of constitution, and the comparatively unimpaired general health of the patient, made it proper in this case.

"In consultation, I suggested to Drs. Murray and Cook that, as neither of us could take charge of, or do justice to, her case, so far from our respective residences, she should be removed, as soon as practicable, to your infirmary, where she would enjoy every advantage and benefit that favorable circumstances, as well as science and art, could afford her case; and that we should all meet and confer with you after her removal to this place; to which suggestions these gentlemen cordially acceded.

"I know nothing of the previous history of this case except what has been related to us by Dr. Murray. In consultation, all the physicians present concurred in opinion with you, that the operation was one of extreme danger, and that the probabilities were as many, perhaps, as a hundred to one against its success.

"Before the operation, Dr. Murray and myself visited the patient, explained to her its great danger, and the very great probability that she might not survive it; telling her that, although it afforded but little hope, it was the only hope of delivery from suffering and death. We told her, further, that it rested entirely with herself to determine whether or not she would submit to the operation. Without persuasion or influence of any kind, she determined promptly and unhesitatingly to submit to the operation, terrified as it was represented to be. She is now doing well, and in all probability will return home next week. Your sincere friend,
J. A. EVE."

Operation.—The bowels having been previously emptied, a large quantity of urine was drawn off by the catheter, which diminished considerably the hypogastric tumor, and proved the bladder to have been generally distended, as there was then no urgency to micturition—in fact, the patient was unconscious of the distention. About two pints were thus evacuated. Chloroform was now inhaled to its full anæsthetic effects, when the vaginal tumor was seized by various forceps, but which, after large tubercular masses were torn off, was finally brought down to the os externum by the left hand. Finding it impossible to remove the firm resisting body now presented to view, it was carefully excised from above downwards, or in an antero-posterior direction, by the knife—I confess, with some suspicions at the time, it might be the uterus. One artery (now believed to be the left uterine), throwing out blood quite vigorously, was seized, and an animal ligature cast around it. A solu-

tion of sulphate of zinc was applied to restrain further hemorrhage, which had been considerable.

There was no protrusion of the bowels, nor was the case followed by any very severe symptoms. A most rigid confinement to the horizontal position was strictly enforced for about ten days, with absolute diet, etc. etc. The bladder, it is presumed, filling up again, pushed the intestines backwards, while the opening made into the peritoneum was closed by agglutination and subsequent adhesion. The rectum was evacuated on the fourth day after the operation by warm water, and the bowels were moved freely by oil on the fifth.

In the mass removed, the uterus is readily recognized, with its Fallopian tubes, broad and round ligaments; but the os tinæ is involved in the cnecephaloid degeneration. The tumor in the vagina was about the size of a child's head at full term. No one, it is believed, who has examined it, has entertained the least doubt but that the entire womb was removed, and this includes, besides the gentlemen who witnessed the operation, Dr. R. D. Mussey, Professor of Surgery in the Medical College of Ohio, and Chairman of the Committee on Surgery for the past year in the American Med. Association; and my preceptor, Dr. C. D. Meigs, the distinguished Prof. of Obstetrics, etc. etc. in the Jefferson Med. College, with whom the uterus has been deposited, and who has kindly insisted upon presenting the case to the profession in his own way.

During my absence at the meeting of the Medical Association in Cincinnati, the case was left under the care of my relative and assistant, Dr. A. P. Longstreet. The patient returned home on the 3d of May, visited Augusta again on the 20th, to inquire why she had had no hemorrhages (menstruation) since the operation; and, in answer to a letter, Dr. Murray writes, on the 10th of June, that he saw her "up and about" the day before, and promised to bring her in a few days to my office.

Fifteenth of June, two months after the operation, the patient, Mary, has called, after riding eleven miles on a loaded lumber wagon. She is much improved in flesh and appearance, and has enjoyed good health. She says there has been a slight show of blood but once since the operation, and only a moderate discharge, at times, of colorless fluid. But I regret to add we have most unmistakable evidence, both ocular and by touch, of a rapid reproduction of the cnecephaloid disease, which in all probability must sooner or later destroy life.

(Extract of a letter dated Augusta, July 29, '50.)

"*My dear Doctor*: I write to say that Mary, my *non-uterine patient*, is dead. She died on the 22d of July, having lived three months and a week after the operation. She became œdematous (ascites, also), but had no hemorrhage, neither protrusion of the disease from the os externum. I regret no post-mortem was made by the physician in attendance, and I only learned her decease incidentally at the time.

"*Dr. C. D. Meigs.*

PAUL F. EVE."

SECTION XII.

AFFECTIONS OF THE GRAVID UTERUS.

CASE I. *The fetus expelled through a rupture of the womb and abdominal wall; recovery.* By Dr. Prael, of Hildesheim. Southern Med. and Surg. Journal, 1845.

A woman, 28 years of age, deformed by rickets, the largest diameter of whose pelvis did not exceed two and a half inches, was delivered by the

Cæsarean section on the 11th of January, 1842. The child was a female, and alive, but died of trismus, on the ninth day. The mother made a tolerably good recovery, notwithstanding the feverish symptoms induced by the suppression of the milk secretion from the death of the infant. It was a couple of months, however, before the cicatrization of the wound was complete. She again became pregnant in January, 1843, and at about the fourth month a small ulcerated point made its appearance on the right side of the abdomen, about a hand's breadth from the cicatrix. It daily increased till it attained the size of the palm, when the feverish symptoms, etc., induced her to apply for medical assistance. When raising herself on the 18th of July, a slight cracking noise was heard, and the abdominal parietes gave way, as well as the uterus itself, allowing the fœtus, still surrounded with its envelopes, to project through the rupture. Before assistance could be procured the infant was dead; a midwife cut through the cord, and got the woman put to bed. Dr. Schroeder, who arrived about an hour after this, separated the placenta, and removed some clots from the uterus. He could not ascertain the direction of the rupture through the walls of the uterus, but that through the abdominal parietes was transverse, and crossed the line of the Cæsarean cicatrix. The edges of this wound were swollen, soft, œdematous, and unequal, and as they seemed as if unable to bear stitches, adhesive strips were used to bring the edges in contact. The fever of reaction which followed was slight; a considerable quantity, however, of bloody sanies flowed out each time the wound was dressed. Acute pain was shortly after complained of at each extremity of the wound, which assumed a gangrenous appearance, and discharged a very fetid sanies. Under quinine, the state of the wound gradually improved; but she was again thrown back by a rheumatic affection, and then by the formation of an abscess in the left inguinal region, accompanied with œdema, and partial paralysis of the corresponding limb. Under tonics and generous diet the wound slowly healed, though the old ulceration of the surface continued to be the seat of painful sensations. By the 5th of October, the cicatrization of the wound was complete; she suffered no pain; had recovered her usual appearance; her menses had reappeared; and she was able to resume her household duties. The transverse cicatrix was situated four inches below the umbilicus, and measured four inches and one line in length. It was very uneven and presented many unequal dilatations. The parietes over it, and the seat of the old ulcer, were very soft and thin.

CASE II. *Peripatetic parturition.* Lancet, 1852.

The following case will show under what trying circumstances parturition may sometimes be effected, with a total absence of untoward results for the mother.

Sarah P——, aged twenty-one, servant of all work, was admitted May 22, 1852, at 11 A. M., having a six months' child hanging between her legs, and the placenta in the vagina. She stated that pains had come on at 5 o'clock in the morning, whilst she was in bed at her place of abode. She got up at half-past seven, and between half-past eight and nine a child was born. At about ten o'clock she went out to a surgeon, who told her to go to the hospital. Mr. Bullock, house-surgeon to St. Mary's, examined her, and found a tense cord issuing from the vagina, and following this downwards he found a child, bearing the marks of five or six months' uterine life, close to the woman's ankles. She must, in fact, have been walking with the fœtus hanging as described for half an hour at least. Mr. Bullock cut the cord, and removed the child, which was quite dead; and, after withdrawing the pla-

centa from the vagina, had the woman conveyed to bed, where she has since done well.

Can this be possible!

CASE III. *Extraction of the child by a novel process.* By A. E. Ames, M. D., of Roscoe. North Western Med. and Surg. Journal, 1851.

Mrs. H., in labor with her tenth child, for seven hours; pains very hard; progress slow. First presentation of Baudelocque; previous to labor, the labia majora and minora had become somewhat swollen, and as the labor progressed the swelling increased, in consequence of the enlargement of the parts. The child's head being very large, completely filling up the pelvic region, and there being no prospect of a natural termination of the labor, and it being impossible to apply the forceps, I determined to perform craniotomy. After having made an incision through the scalp, $2\frac{1}{2}$ inches in length, I raised the scalp and passed two fingers of my right hand under it far enough, so that when I made extension, the force would not come against the edges of the incision; then placing my left hand against the perineum, I made extension with my right. This had a tendency to elongate the head of the child, and aided by the pains, which were very good from the first, the child was born alive. The wound was dressed with simple dressings.

Thus may a child, in my opinion, be saved. This may not be a *new act* in obstetrics; if it is, please place the same before the public eye.

CASE IV. *Spontaneous rupture of the umbilical cord.* By Joseph May Parrish, M. D. New Jersey Medical Reporter, 1852.

I was called to see a German lady in labor with her second child; found her with an ample pelvis, the head presenting its vertex, os uteri dilated fully, secretions abundant, and the membranes formed into a large pouch over the child. I diagnosticated a speedy and easy delivery, and proceeded to prepare the patient and bed, *secundum artem*. In less than half an hour the waters were evacuated, and the head readily engaged in the inferior strait; when the pains became very laborious and continued; firm pressure was made with a compress upon the perineum, to save it from injury, and the labor allowed to progress without interference. The head was soon born, but without relieving the continued effort at expulsion. To aid in the delivery of the shoulders, I hooked my index finger into the axilla, and made slight traction to disengage the body. A very little effort brought the shoulder from behind the pubes, and a powerful contraction of the uterus expelled the entire body, throwing it some two feet from the mother, and *rupturing the cord about three inches from the umbilicus*. The child was immediately sprinkled with blood, which first attracted my attention to the fact. At the point of separation, the cord was lacerated for an inch or more in its length. After securing the foetal portion of it, and disposing of the child, which did not seem to be injured by the hemorrhage, I proceeded to deliver the placenta. Placing my left hand over the fundus uteri, and making firm pressure, and at the same time using gentle traction with my right, upon the cord, I felt it yielding under the effort, and therefore trusted to the expulsive powers of the uterus to disengage it. In a very few minutes it came away, and I found it lacerated in another place, though not entirely separated. Never having met with a similar instance in my own experience, and not remembering to have seen a notice of any such in books, I state the case simply as it occurred. It is true that we often witness cases where partial disorganization has taken place, from the death of the fetus, or where the placenta and its attachments may not be developed, as in premature births; but the child in this instance had lived

out the full period of utero-gestation; the mother is a fine, healthy, robust woman, and the rupture was purely the result of powerful uterine effort.

CASE V. *Extensive injury of the fœtus in utero, and partial reparation before its birth.* By J. D. Jones, M. R. C. S. E. British and Foreign Med.-Chir. Review, 1850.

A lady in her first confinement had, from the ample size of the pelvis, a more than usually speedy and easy labor, and was safely delivered of a male child of average size. The attendants were somewhat frightened at observing on the back of the infant, an extensive open wound, reaching from the third dorsal vertebra, across the scapula, along the back part of the humerus, to within an inch of the elbow. A large proportion of one part of the wound, with the exception of a nipple-like process near the vertebra, was already cicatrized, so as to negative the idea of the wound having been produced during labor; and other parts had a healthy granulating surface. The integuments only were implicated, the muscles not being in the least affected. How came this wound?

It appears that the mother, during the whole term of pregnancy, enjoyed more than her usual health, and took much walking exercise. About six weeks before her delivery, when running down stairs, she trod upon a cat, and made a sudden spring to the bottom (five or six steps), alighting on her feet. A severe shock was felt at the time, and slight faintness. Rest on a sofa and a glass of wine soon rallied her; but next day she had a slight sanguineous discharge from the vagina, which passed off, and the circumstance might have been forgotten but for the marked child. A blow, the funis, and the violent and sudden contraction of the uterus, are briefly discussed and dismissed as causes of this remarkable phenomenon; and it is referred to the fall of the mother six weeks before as its most probable source. The case is believed to be unique; and it is pointed out as a warning against a too hasty conclusion of guilt in the mother, should such a wound be found in a recent state on the body of the offspring of an unmarried female, in whom a similar accident might possibly produce, together with the wound, premature labor and the death of the child.

CASE VI. *Mortification of a limb in an infant at birth; death.* In Graefe and Walther's Journal—Laneet, 1827, vol. xii.

A woman was brought to bed a month before her time with twins. One of the children was quite putrid, and dead born; the other, however, was alive, but there was gangrene of one of its lower extremities, extending from the foot to the knee. The ankle-joint was exposed, and both tibia and fibula were projecting through. The child died on the following day. On *examination*, the femoral artery, half way down the thigh, was found closed by a caseous kind of lymph. During pregnancy, the mother had experienced nothing to which the death of the one, and the mortification of the other child, could be ascribed.

CASE VII. *Amputation of the thigh down to the bone, etc., in utero.* Laneet, 1852.

The patient in this case is only two years and a half old, and was brought to Sitwell ward Oct. 4, 1850. No malformation of any kind exists in the parents or in the other children, but this boy presents a deep furrow around the right thigh, just above the patella, which furrow reaches down to the bone. The parts look exactly as if a cord had, for a considerable time, been tightly surrounding the thigh. The skin is adherent to the bone, and there seems

to be but just enough room for the vessels, nerves, and hamstrings to reach the leg. Both feet are affected with talipes varus, and the index finger of the left hand is compressed from above downwards. On the right hand the thumb and index finger are sound, but the three other fingers are merely rudimentary. There is a certain amount of œdema in the right leg, owing, probably, to the constricted state of the parts immediately above the knee-joint; progression is nevertheless pretty easily, though awkwardly, accomplished. The knee is, however, so defective that it is chiefly with the muscles of the thigh that the whole limb is moved about. It was of course hardly advisable to interfere in a case of this description, and the little patient was accordingly discharged.

CASE VIII. *Amputation of a leg in utero, etc., and discharge of the foot before delivery of the child.* By F. D. Fitch, M. D., of New Boston, New Hampshire. American Journal Med. Sciences, 1856.

Mrs. ———, a healthy, laboring woman, mother of six robust children, but who had suffered an abortion from injury in her last pregnancy, was alarmed, March 17th, about the sixth and a half month of gestation, by a sudden discharge of the liq. amnii. This discharge at first, though unattended by pain, was abundant, and continued in decreasing quantities for forty-eight hours.

On the morning of the 21st, a substance escaped from the vagina, which was found to be a perfectly-formed foetal foot, apparently separated at the ankle-joint, and in a state of complete preservation. At this time the abdominal tumor had greatly diminished; the foetal movements within the womb were active, but no expulsive efforts had occurred. On the next day a slight uterine hemorrhage supervened, which, on the 27th, had so much increased as to require attention. For three days the bleeding was arrested almost entirely; but at the end of this period, although there was yet no indication of an effort in the uterus to throw off its contents, while the woman was engaged, contrary to earnest entreaties, in severe exercise, the flowing was renewed, and the patient lost at a single gush, according to her own statement, "more than a quart of fresh blood." Faintness was induced, but by attention to prescriptions she was again made comfortable. In this condition the patient remained till the morning of the 5th of April, when, after a labor of ordinary duration, she was delivered under circumstances of extreme danger from the excessive flooding that ensued. The cord was ruptured at the moment of delivery by a sudden movement of the mother, and was afterwards found to be unusually weak throughout its whole length.

The child exhibited signs of life more than half an hour after birth, and on examination presented the following condition: It had attained full size for that period (about the seventh month), and was apparently vigorous. Situated a little to the left of the centre of the forehead was a horny protuberance, of the size of the middle finger, projecting about half an inch. Below, upon the face, was an extensive deformity, caused by the entire absence of the upper lip and bones beneath to a great extent. This last malformation the mother *very confidently* attributed to an accidental view of a person whose upper lip and part of the nose had been destroyed by a cancerous sore. But what excited the greatest interest in this case, and, in connection with the early discharge of the foot, gave origin to this communication, was the condition of the right lower extremity. As far as the knee-joint this limb did not differ in appearance from its fellow, but at that point it terminated abruptly, and over the end the skin had contracted uniformly from every side towards the centre, without, however, forming a complete cicatrix. With these exceptions the child was perfect.

It was fifteen days previous to the birth of the child that the foot, exhibiting no traces of decay, was passed from the vagina, without pain, and unattended by any sanguineous discharge; and it should be added, that, two days after delivery, a substance escaped which had every appearance of having been the portion intervening between the knee and ankle-joints, but at that time in a state of decomposition so advanced, that it could not be well examined. Upon the foot the place of separation was contracted to the size of a small pin-head, and the healing process had apparently been as perfect, and had progressed very nearly as far, as that on the lower extremity of the femur.

In the above case is presented a remarkable property of the impregnated uterus. As the contractions or healing upon the divided surfaces of the limb could not have been accomplished at once, it appears evident that in this instance the uterus not only preserved a detached portion of the fœtus from decay, but maintained its vitality also; nor is this supposition contradicted by the putrescent condition of another portion of the limb, as that had remained exposed to the warmth of the body and other influences two days after delivery of the child.

The mother recovered rapidly, and in eight months was suddenly delivered again, of twins, one of which survived two, and the other ten days.

CASE IX. *Amputation of the leg down to the bones by the cord.* By Dr. Purple, Editor of the New York Journal of Medicine, 1852.

Mrs. G—, the mother of three children, was seized with symptoms indicative of miscarriage, in August, 1851. She believed herself to be about six months advanced in gestation. A course of treatment adapted to the necessities of the case was resorted to, but without having the desired effect. On the following day, about twenty-four hours after the first visit, on attempting a vaginal examination, the breech was found presenting, and as it was low down, an attempt was made to deliver the right leg. Failing in this, owing to some unaccountable obstruction, the left leg was delivered, and then with some little delay, the right was brought down, so as to ascertain that the cord was tightly fastened to it just above the ankle. Traction was made upon the funis, and the finger passed between the cord and the leg, so as to lessen the tension sufficient to extricate the leg from the coil. In doing so, it was found that the funis was somewhat adherent to the leg, around which it was turned. On extricating the leg from the funis, the delivery of the child was easily effected, and the cord was found to be around the neck also.

On inspection after delivery, the leg, at the point where the cord passed around it, was found almost amputated—in fact entirely so but the bones—the tibia and fibula only remaining.

CASE X. *A knot in the cord around the body destroying the fœtus.* By Samuel S. Purple, M. D., of New York City. New York Journal of Medicine, 1852.

The case reported proves to my mind, conclusively, that a knot in the funis can produce death of the fœtus in utero, and abortion follows as the consequence. While recording my own convictions on this point, a strong example recurs to my mind, in the case reported and illustrated by Dr. Jameson, of Baltimore, where the body of the fœtus was caught around the abdomen, and nearly severed in a knot tied in the funis, thus causing the death of the fœtus and abortion. In this case, to use Dr. J.'s own language, "the whole appearance was such as most clearly evinced that it had, long prior to its death, become entangled in its umbilical cord, that the head must in some way have slipped through a noose, occasioned, probably, by an unusual length of the

cord, and that it had pined away gradually, as the knot became closer, and thus finally destroyed it."

Rupture and inversion of the uterus in a cow. Philadelphia Journal of Med. and Physical Sciences.

This animal, belonging to a respectable gentleman of Cincinnati, was observed, during parturition, to be in a great deal of distress, by which a considerable number of persons were attracted to discover what would be the result. During a violent effort at expulsion, a noise was heard by the bystanders, which they compared to the sudden rending of a strong cloth, and it was very plainly to be seen, that the calf had escaped into the cavity of the belly. The owner of the animal then proposed to knock her on the head, supposing she would die in a lingering and painful manner. Some one present interfered, and offered to deliver her by bringing the calf through the laceration of the uterus again into the cavity of the organ. Accordingly the hand and arm were introduced until the whole arm, as high as the shoulder, was passed in. After some time spent in searching for the feet, the assistant drew them partly into the uterus, when an effort was made by the cow, which expelled the uterus and the calf at the same time. The uterus was fairly inverted and had a very large rupture extending obliquely across the fundus.

As the uterus had been received on a cloth and was not allowed to come in contact with sand or dirt, an attempt was immediately made to return it by two persons, who gathered it up as closely as possible, though without much attending to the order in which it was to be reduced; after many strenuous attempts they succeeded in returning it. The cow was fed a day or two on thin slop, but in a few days walked to pasture, and is, at this time (six weeks since the occurrence of the laceration and inversion), perfectly well, and gives a gallon of milk daily.

SECTION XIII.

AFFECTIONS OF THE OVARIUM.

CASE I. *Death from the revolution of an ovarian tumor on its own axis.* By W. H. H. Richardson, M. D., of East Montpelier, Vermont. New Hampshire Journal of Medicine, 1854.

R. T., aged 29, widow and mother of five children, first sought medical advice on the 30th of May, 1850. She had enjoyed good health until three years since, when she discovered a tumor in the right iliac fossa, which (she said) "had constantly increased up to this time." Since the first discovery of the tumor she had borne one child.

When first examined her general health was quite good; catamenia regular; bowels somewhat costive. The tumor appeared to be ovarian—to contain no cysts (as there was no crepitation upon manipulation)—about six inches in diameter, and to have great mobility.

A vaginal examination discovered the mouth of the womb to be in a state of ulceration; these ulcerations were cauterized with nit. argent. once a week until they healed. Blisters were applied over the tumor in front and a dressing of ung. potass. iodid.

On the 24th of August the tumor seemed to have considerably decreased, but there had been occasional uterine hemorrhage accompanied by tetanic convulsions (supposed to depend upon uterine irritation) and occasional colicky pains in the right iliac region.

On the 28th of August symptoms of acute peritonitis appeared, of a local character, and confined to the region of the tumor, at which place the tenderness on pressure was excessive; elsewhere it was not well marked.

She was treated actively with calomel and opium, and blisters to the region of tenderness.

Aug. 29. The symptoms were better; less tenderness on pressure over the tumor, but a peculiar sensation of crepitation which was attributed to recently effused lymph, connecting the surface of the tumor to the parietes of the abdomen. The tumor was now fixed in its position, having lost all mobility. By the first of Sept. the symptoms of peritonitis had mainly disappeared, but those of an intense enteritis were manifested; pulse 120, small, and wiry; extremities cold; face pinched and sunken; great præcordial anxiety, and frequent profuse watery discharges tinged with blood. These acute symptoms were by active treatment subdued, but the patient gradually sank, and died on the 8th of Sept.

Autopsy twelve hours after death. The parietes of the abdomen were found adherent to the surface of the tumor, which was of a very dark color, and at points greenish. The peritoneum in contact was stained dark by imbibition. The small intestines and colon were everywhere adherent to the tumor, which was found firmly fixed in its position, but the adhesions were easily torn through, being evidently recent. No fluid was found in the peritoneal cavity nor any evidence of peritonitis, except in the region of the tumor. On separating the tumor from its adhesions, it was found to be attached to the uterus by the right broad ligament, and in fact, to consist of the right ovary.

The pedicle of the tumor was found in a very short tight twist, which appeared to have resulted from the revolution of the tumor on its axis one and a half times. The veins on the distal side of the tumor were very much distended. Internally the tumor was deeply stained with blood, having been intensely congested. It was fibrous, with irregular cavities in its centre.

The mucous surface of the large intestines had evidently been the seat of severe inflammation; it was thickened, softened, and very red from minute extravasations. The small intestines were not essentially diseased.

The revolutions of the tumor, doubtless, caused the colicky pains, and then congestion and engorgement, which gradually passed into inflammation.

I do not recollect to have heard or read of a similar cause of death.

CASES II.—VIII. *Ovariectomy*.—Dr. McDowell's cases. Report made by Prof. Gross to the Kentucky Med. Society.

This gives a good introduction to the subject of ovariectomy, since Dr. McDowell's name is so intimately connected with the operation, and Dr. Gross has done full justice to our countryman.

To Kentucky belongs the honor of having furnished to the world the first case of extirpation of the ovary, for organic disease of this organ. This honor is justly and exclusively due to the late Dr. Ephraim McDowell, of Danville. From a paper published by this gentleman in the seventh volume of the *Philadelphia Eclectic Repertory*, it appears that his first operation was performed in December, 1809. It is not known, with any degree of certainty, how often Dr. McDowell repeated this operation; his published cases amount only to five, but there is reason to believe, from what I have learned from his nephew, Dr. Wm. A. McDowell, that he performed it not less than thirty times.

During the progress of my labor, as Chairman of the Committee on Sur-

gery, of this Society, I have, in consequence of letters addressed to various gentlemen in Kentucky, Ohio, and Tennessee, been made acquainted with the particulars of three cases more, which, added to those published by Dr. Ephraim McDowell himself, increase the aggregate to eight. It is to be deeply regretted that Dr. McDowell did not keep a record of his operations, or communicate the results to his professional brethren. Such a contribution would not only have greatly enhanced his reputation as a bold and original surgeon, but it would have conferred an inestimable boon upon suffering humanity.

As the operations in question reflect the highest credit, not only upon Kentucky, and upon Kentucky's illustrious surgeon, but upon the United States, and as they have been mainly, if not exclusively, instrumental in directing the attention of the profession, both in America and in Europe, to a subject which has, of late years, elicited so much interest, research and skill, it is proper that I should give a brief analysis of them, in order, more especially, that the world at large may know what knowledge and science, when aided by intrepidity and dexterity, may accomplish even in a backwoods settlement of Kentucky. Dr. McDowell's first three cases are published in the seventh, and the last two in the ninth volume of the *Philadelphia Eclectic Repertory*.

Dr. McDowell's *first operation* was performed upon Mrs. Crawford, of Kentucky, in December, 1809. The tumor inclined more to one side than the other, and was so large as to induce her professional attendant to believe that she was in the last stage of pregnancy. She was affected with pains similar to those of labor, from which she could find no relief. The wound was made on the left side of the median line, some distance from the outer edge of the straight muscle, and was nine inches in length. As soon as the incision was completed, the intestines rushed out upon the table; and so completely was the abdomen filled by the tumor, that they could not be replaced during the operation, which was finished in 25 minutes. In consequence of its great bulk, Dr. McDowell was obliged to puncture it before it could be removed; he then threw a ligature around the Fallopian tube, near the uterus, and cut through the attachments of the morbid growth. The sac weighed seven pounds and a half, and contained fifteen pounds of a turbid, gelatinous looking substance. The edges of the wound being brought together by the interrupted suture and adhesive strips, the woman was placed in bed and put upon the antiphlogistic regimen. "In five days," says Dr. McDowell, "I visited her, and, much to my astonishment, found her engaged in making up her bed. I gave her particular caution for the future; and in twenty-five days she returned home in good health, which she continues to enjoy."

It will not be uninteresting here to state that Mrs. Crawford, at the time of the operation performed upon her by Dr. McDowell, lived in Green county, Kentucky, from whence she removed, some time afterwards, to a settlement upon the Wabash river, in Indiana, where she died, March 30th, 1841, in the 79th year of her age. There was no return of her disease, and she generally enjoyed good health up to the period of her death. She had no issue after the operation. Her youngest child, our worthy citizen, Mr. Thos. H. Crawford, who has kindly communicated to me these facts, was born in 1803, nearly or quite six years before the operation.

The *second case* was that of a negress. The tumor is stated to have been very large, and so firmly adherent to the bladder and uterus as to render any attempt at extraction perfectly futile. The operator, therefore, contented himself with making a free incision into it with a scalpel, to let out its contents, which were of a thick, ropy, and gelatinous character. The incision

was of the same length, and made in the same situation as in the preceding case. Upwards of a quart of blood was lost in the operation. The wound, which was dressed in the ordinary manner, healed without any untoward symptom. The woman remained well for nearly five years, when the tumor began to increase again, and in twelve months it was as large as it was before the operation.

The *third operation* was performed in May, 1816. The subject was a negro woman; and the ovarium, which was much enlarged, could be easily moved from side to side, to the left of which, however, it was adherent. Dr. McDowell made an incision into the linea alba, from an inch below the umbilicus to within an inch of the pubes, and then extended the opening towards the right side, about two inches above the former point, to afford himself more room. He next passed a ligature round the Fallopian tube, and "turned out" the left ovary, which was found to be in a scirrhus condition, and to weigh six pounds. The wound was dressed as in the preceding cases, and the woman was well in two weeks, though the ligature did not come away under five weeks. No mention is made of the manner in which the adhesions were overcome.

Dr. McDowell performed his *fourth operation* in April, 1817, upon a colored woman, from Garrard county, Kentucky, removing a scirrhus ovary, weighing five pounds. The incision was made near the linea alba, but its extent is not mentioned. The ligature slipped from the Fallopian tube, after its division, and, in consequence, a great loss of blood took place. Several arteries were then tied; but this not arresting the hemorrhage, a large ligature was passed round the whole stump of the tube, and secured in the most careful manner. Although the woman was much exhausted, she happily recovered, but did not fully regain her health. "This, though the smallest ovarium I have ever extracted," says Dr. McDowell, "was much more troublesome to the patient than in any previous case. Besides experiencing severe lancinating pains in the parts, she was seldom able to discharge her urine without getting almost on her head, in consequence of the tumor falling down into the pelvis and compressing the urethra."

His *fifth* recorded operation was performed by Dr. McDowell on the 11th of May, 1819. The patient, likewise a negress, and the mother of one child, was from Lincoln county, in this State, and was supposed by her physician to be laboring under ascites, as the tumor was very large and fluctuating. After having given her hydragogue medicines for some time without any benefit, Dr. McDowell tapped her, and drew off thirteen quarts of thick, gelatinous fluid. The operation was repeated in two months, and it was now ascertained, after the matter was all evacuated, that there was a firm substance of considerable size, which was evidently a dropsical ovary. Some months after this she was again tapped, and the opening was enlarged so as to admit the finger, which was freely used as a probe, that there might no longer be any doubt respecting the true character of the disease. The incision was made on the left side of the median line, down to the tumor, which was found firmly adherent to the parietes of the abdomen and to the intestines, by slender cords, which were easily separated by the hands. The ligamentous bands attaching the tumor to the uterus, were surrounded by ligatures, after which the tumor was opened, its contents discharged, and the sac extracted. The fluid measured sixteen quarts, and was of a gelatinous character, intermixed with a considerable quantity of hair, and a body resembling very much, in shape, the front tooth of a cow. Violent peritonitis ensued, followed by death on the third day. The uterus and right ovary were perfectly natural,

and the ligatures were well applied, and not in a situation likely to injure the adjoining parts.

It will thus be perceived that, of these five cases, three were entirely successful; that one recovered, and remained well for nearly five years, when the tumor recommenced growing; and that one died from peritoneal inflammation within three days after the extirpation of the diseased mass. This success is fully equal to the average success attendant upon ovariectomy in the hands of modern operators. According to the calculations of my friend, Prof. Atlee, of Philadelphia, founded upon an analysis of upwards of two hundred cases, the rate of mortality for the operation in question is $26\frac{1}{2}$ per cent.

A highly respectable lady, Mrs. O., aged 55 years, of the neighborhood of Nashville, Tennessee, consulted Dr. McDowell, through her professional adviser, Dr. James Overton, in July, 1822, concerning a tumor in the left side of the abdomen, which she had first noticed some time during the previous December. Being a member of a family inclined to corpulency, she paid no particular attention to it for several months, the more especially as it was free from pain or soreness. The enlargement of the abdomen continued to increase gradually, and early in the following May she felt distinctly, on the left side, and a little below the level of the umbilicus, a small globular tumor, destitute of sensibility, and movable from side to side, as well as from above downwards. About the middle of June, by which time the swelling had considerably augmented in volume, the patient was seized with pains in the back, hips and thighs, much resembling the first pains of parturition. By the use of laxatives, warm bathing and anodynes, these symptoms were subdued, and she enjoyed an interval of ease and health, until the latter part of July, when there was a recurrence of the local distress, in a more aggravated form, with great tenderness on pressure. The urinary secretion was natural, both as to quantity and quality, and the uterus appeared to be perfectly sound. No fluctuation could be discovered at this time in the swelling; and the integuments of the abdomen were quite lax, except at the site of the enlargement, where they were very tense.

When Dr. McDowell visited the patient, in the summer of 1822, the tumor filled nearly the whole of the abdomen, and she had the appearance of a female in the sixth month of utero-gestation. The general health was a good deal impaired, from the absence of sleep, and the presence of fever, and there was a sense of weight and dragging in the pelvis, with acute pain in the swelling, perineum, and thighs.

Supposing the disease to consist in a morbid enlargement of the left ovary, Dr. McDowell designed to extirpate it with the scalpel, and for this purpose made an incision from five to six inches in length, along the linea alba, over the most prominent part of the tumor, down to the peritoneum. Having laid bare this membrane, he proceeded cautiously to divide it, intending to make an opening sufficiently large to admit of the removal of the diseased organ. In this, however, he was disappointed; for he had no sooner made his first incision through the peritoneum, than there gushed out, in a full stream, a bloody looking serum, which continued to flow till the sac which had contained it was apparently entirely empty. The quantity thus lost was about one gallon. The edges of the wound were then approximated by several interrupted sutures, light dressings were applied, and the abdomen was encircled by a broad bandage. This constituted the whole of the operative procedure. No attempt was made, or even deemed practicable, to extirpate the diseased organ, inasmuch as it adhered so closely to the peritoneum as to render it impossible to distinguish or separate it from it. Indeed, Dr.

McDowell supposed that he was dividing the peritoneum only when the knife penetrated the ovarian sac. The circumstance took him, as well as every one present, by surprise, because it was entirely unanticipated.

The wound continued to discharge matter for some time after the operation, from the lower extremity of the incision, where a tent was kept for that object. The fluid gradually lost its sanious character, and as it diminished in quantity it assumed more and more the appearance of healthy pus. The wound was entirely healed at the end of about five weeks; and the patient, who lived from fifteen to twenty years after the operation, enjoyed excellent health; nor did she at any subsequent period, suffer any pain or uneasiness which could be justly ascribed to disease of the ovary, or any other organ connected with the uterus.

The interest of this case is heightened by the circumstance that the late President Jackson, who was a near neighbor of the patient, was present at the operation, assisting in holding her hands, and supporting her resolution.

For the above interesting and valuable details, I am indebted to Dr. James Overton, an eminent practitioner of Nashville, Tennessee, who was present at the operation, and who had charge of the case, both before and after the operation by Dr. McDowell, who visited the patient at her own residence.

For the details of the next case I am indebted to my venerable friend, Dr. W. C. Galt, for many years one of the most successful and distinguished physicians of Louisville.

The subject of this case was Miss Plasters, of the neighborhood of this city, who was attacked, in the winter of 1821, with enlargement and pain of the right ovary. The disease gradually increased, and in February, 1823, she was tapped for the removal of the contents of the tumor. The dropsical symptoms, however, soon reappeared, and believing that excision of the affected organ afforded the only chance of permanent relief, her medical advisers, Drs. Galt and Ragland, requested her to consult Dr. McDowell. I have not been able to obtain any information as to the age of the patient, and the size of the tumor; but from a letter written by Dr. McDowell to Dr. Galt, some time after the operation, I learn that the enlarged viscus filled the entire abdominal cavity, and that out of nine cases that had presented themselves with this disease, up to the period adverted to, that of Miss Plasters appeared by far the most hopeless. Upon her arrival at Danville, she was so extremely debilitated that it was believed she would hardly be able to sustain the shock of the operation.

The patient having undergone the requisite preliminary treatment, the operation was performed on the 12th of May, 1823. An incision was made into the abdominal cavity, extending the whole length of the linea alba. Finding the tumor so large that it could not be removed entire, a free opening was made into it, discharging about six pints of fluid. The morbid mass was then lifted from its bed, though not without difficulty, a ligature having been previously cast round its footstalk or uterine attachment. The abdominal cavity having been cleared of blood and water, the edges of the wound were carefully closed, in the usual manner, and the woman put to bed.

The omentum is said to have been much inflamed and thickened, not, as Dr. McDowell supposed, from the effects of the previous tapping, but from organic disease of its own structure. For ten or fifteen days after the operation there was a bloody putrid discharge from the wound, "which," says Dr. McDowell, "I am well assured could arise from nothing but sloughing of the omentum."

Notwithstanding her debilitated condition before and for some time after

the operation, Miss Plasters entirely recovered. On the 4th of August, less than three months after the removal of the tumor, Dr. McDowell informed Dr. Galt that she was in "perfect health and spirits."

CASE IX. *Excision of both ovaries for dropsy; recovery.* By E. R. Peaslee, M. D., Prof. in the Maine and New York Medical Colleges.

The particulars of this operation are detailed in the 21st volume, New Series, 1851, of the *American Journal of the Medical Sciences*. The patient was an unmarried lady, aged 25, intelligent, and of pretty fair constitution. A tumor in the abdomen had been detected eighteen months before the operation, which was pronounced ovarian in character, and which grew rapidly after drastic purgatives were employed. A tapping of the abdomen confirmed the diagnosis, and on the 21st of September, 1850, in New Hampshire, Dr. Peaslee made the large abdominal section while the patient was under ether and chloroform. Twenty-two pounds of fluid were evacuated, and the pedicle of the diseased left ovary transfixed with a double ligature, the eye of the needle cut out, the ligatures now tightened, and the organ excised. The right ovary was found to be similarly affected, and was treated in the same manner. The patient fully recovered without any very grave symptoms.

Dr. Peaslee thinks the case unique as far as the successful removal of both ovaries at the same time by the large peritoneal section.

CASE X. *An ovary removed by mistake for a labial cyst; death.* Provincial Med. and Surg. Journal—American Journal Med. Sciences, 1851.

At one of the late meetings of the Surgical Society of Paris, M. Guersant, Chief Surgeon to the hospital for children, brought forward a case in which an error in diagnosis was committed, and which ended fatally. The patient was a little girl, eleven years of age, who, ever since she was one year old, had in her left labium, a small painless tumor. Of late, however, this tumor had become troublesome, and interfered with walking. When examined, it was found the size of a small walnut, situated in the thickness of the labium, and extremely movable, so much so that it could be pushed downwards to the most posterior portion of the labium, and upwards as far as the external ring. It was, however, impossible to press the tumor into the ring, which latter presented no abnormal dilatation. The tumor had a great deal of analogy with a testicle. M. Guersant looked upon it as a cyst, and resolved to remove it. A longitudinal incision brought into view a membrane which resembled the tunica vaginalis, and having the aspect of the peritoneum. Through this membrane an ovoid body was observed, which was no other than the ovary; it was attached to a pedicle formed by the Fallopian tube, which ran into the abdomen through the inguinal canal. M. Guersant placed a ligature on the pedicle, and cut out the ovary. Acute peritonitis occurred on the very next day, and the patient died on the third day after the operation.

CASE XI. *Ovariectomy; recovery.* By Prof. William H. Van Buren, M. D., University of New York. Transactions American Med. Association, vol. iv.

The patient was twenty-one years of age, and had menstruated. The tumor was of five years' growth, and to conceal the abdominal protuberance, pressure had been so forcibly applied by stays as to have extruded the uterus and a portion of the inverted vagina. Under chloroform the linea alba was opened ten inches, and subsequently enlarged fully two more. The tumor was found attached at its upper surface to the omentum, and three ligatures were required to its vessels opened by the operation. It proved to be the left ovary, and was strictly fibrous in its character. Five ligatures were first applied to

the vessels of the elongated broad ligament, which were afterwards reduced to a single one around it, and the Fallopian tube. The mass removed weighed seven pounds, and measured twenty-three inches in circumference.

This patient wore a pessary for ten months to keep the uterus *in situ*, menstruated within a month after this operation, and is now a married woman, residing in the country near New York city.

CASE XII. *Extraordinary ossific enlargement of the ovary; with a brief synopsis of analogous cases.* By E. Geddings, M. D., Prof. of Surgery in the Medical College of South Carolina. Southern Med. and Surg. Journal, 1838.

The subject of my remarks was a black woman, aged 60 years, the mother of two children. Her occupation was that of a field-hand, in which situation she was able to perform her task. Her general health was good, and her principal complaint was occasional pain of the abdomen, sometimes followed by convulsions, which generally yielded to a dose of castor oil. She became pregnant of her second child at the age of twenty years, and was delivered safely at the usual time, but had a painful parturition. Shortly after delivery, a swelling was observed in the lower part of the abdomen, which increased so rapidly, that she soon became as large as before her confinement. She continued to menstruate, and had no children afterwards. This circumstance, together with the tumor of the abdomen, induced her to believe that she was *tricked* (bewitched). All attempts to influence the tumor by medical treatment were unavailing, and for some time before death, her abdomen presented the appearance of that of a female in the last stages of pregnancy. She continued to be useful to her owners almost to the last, and finally died suddenly of convulsions.

Necropsy.—The body presented no appearance of emaciation. The large abdominal tumor was round, hard to the touch, and slightly uneven on the surface. It reached from the pelvis to near the ensiform cartilage of the sternum, and was slightly inclined to the right side. On laying open the abdomen, the tumor was found to occupy the right ovary. The whole of the anterior part of its circumference adhered so closely to the inner surface of the abdominal parietes, especially at the umbilicus, that considerable difficulty was experienced in separating the attachment. In the right iliac fossa, it was adherent to some of the convolutions of the small intestines, and in its circumference, from right to left, it was firmly united with the ascending, transverse, and descending colon. Behind the line of this latter adhesion, the posterior surface of the tumor, equal to about one-half of its extent, was perfectly free and smooth upon the surface, most of the convolutions of the small intestines resting between it and the posterior part of the abdomen.

The tumor was detached from the parts to which it adhered, and removed from the abdomen, with the uterus annexed. It was of an elliptic, or ovoid shape; somewhat uneven upon the surface: was covered by the thickened peritoneum, and upon its anterior part, with the false membranes by which it had been tied to the neighboring structures. The uterus was healthy, and presented the right Fallopian tube extending to the body of the tumor, in which it was lost. The entire weight of the latter was fifteen pounds. In its longest diameter it measured nine inches; the transverse diameter was seven inches and a half; the lateral diameter, eight inches. The portion which adhered to the umbilicus was somewhat soft, and presented evidences of fluctuation. When cut into, about eight ounces of curdy matter were discharged. All the rest of the tumor was so hard and resistant, that it could only be divided with a saw. From three to four-fifths of its substance was composed of bone, part of which existed in the form of homogeneous solid masses, possessing

the ordinary properties of bone, while in other portions, the osseous tissue was deposited in form of plates and spiculæ, united by a firm, tough, fibrous tissue. The ossific transformation was not confined to the external fibrous envelope of the organ, but was disseminated through its entire substance, and had supplanted every vestige of its natural structure.

Partial ossific transformation of the ovaria, is by no means of rare occurrence; but I know of no instance in which it was as extensive as in the case just detailed. In most of the examples, indeed, that have been reported, it was either confined to the fibrous envelope of the organ, or if it occurred in the proper substance of the ovaria, it was merely in the form of small isolated particles. It is proper, nevertheless, to remark, that calcareous deposits of considerable size are occasionally found in the same situation, many of which have doubtless been described by persons not accustomed to make pathological investigations, as examples of ossification of the ovaria.

As some of the readers of this journal may be anxious to know some of the cases of osseous and calcareous deposits in the ovaria which have been recorded, I shall subjoin a brief synopsis of such as I have been able to find, by a hasty reference to the materials of my own library, premising, that the list might be extended by more extensive research.

Drelincurti reports the case of a lady of noble birth, the mother of five children, who died of a disease of the left ovary. It contained fifty pounds of fluid, some limpid, some albuminous and meliceric, and, besides, a gypseous material, through which many rough, hard spiculæ were disseminated.

Two instances of more extensive ossific transformation have been described by Morgagni. In the ovary of a female, who died of an affection of the chest, besides several small vesicles filled with fluid, we found two large empty cells, the tunic of one of which was composed partly of bone; that of the other was entirely osseous, and presented upon its surface numerous inequalities, similar to the convolutions of the intestines. The other case was that of an hysterical female, who died a few hours after delivery. In one ovary an osseous cell was discovered, containing a grumous fluid.

Stork has reported a case in which an osseous concretion, as large as a pea, was formed in the lower part of one of the ovaria; and in one instance observed by Walter, a hard osseous concretion, as large as a nut, was situated beneath the membranous envelope of the ovary. The individual was a female, aged 32 years. Le Clere found the right ovary of a female, aged 60 years, as large as two fists, and disseminated through its substance there were numerous small points of ossification. In the case of an old woman, whose body was examined by Nicolai, the right ovary was as large as a goose's-egg, and the inner part of it was ossified. Frank also mentions the instance of a barren female, in whose ovary a small bone was discovered after death.

The following case, reported by Chopart, is more interesting: A female, aged thirty years, who had enjoyed good health, experienced an unusually copious flux of the menses, which continued beyond the ordinary time. She had no subsequent recurrence of this evacuation, and as her abdomen soon began to enlarge, she fancied herself pregnant. At the fifth month, she even imagined she felt the motions of the child, and the same sensations were experienced up to within a fortnight of her death, which took place nine months after the period of her last menstruation. The house-surgeon of Hôtel Dieu, who was called upon to perform the Cæsarean operation, found in the abdomen a tumor, which he at first mistook for the uterus, containing a fœtus. It proved to be an ovarian tumor, which on being opened, discharged a sanguinolent serosity, and seemed to be composed, in part, of an inodorous

parenchymatous substance, which occupied the two upper thirds of the tumor. The other third was occupied by an osseous concretion, which was extremely hard, of the shape of the cranium of an infant, concave within, and so intimately adherent to the walls of the cyst, that it was with difficulty separated by dissection. This mass of bone was more than an inch thick in the centre, extremely hard and rough on the surface, and weighed twenty-one ounces. The walls of the cyst also contained several laminae of bone in their substance.

In a case observed by Schlenucker, the left ovarium was hard and stony, and weighed three ounces. Voigtel refers also to Graafe, Cavallini, Ludwig, Saviard, De Haen, Sandifort, and Chambon de Montaux, for other examples of osseous and stony concretions of the ovaria; and Muckel mentions, that he has not unfrequently found osseous concretions in the substance of the ovaria of young females of pleasure.

In a very interesting case described by Hooper, in which an ovarian dropsy burst through the walls of the abdomen, and discharged a large quantity of gelatinous fluid, the surgeon, in passing a bandage round the body, heard a rattling noise within, and passing his fingers through the opening, he easily detached and pulled out several portions of bone, of angular shape, some two inches long and about one in thickness, others smaller. Still the rattling was occasionally repeated; another surgeon was sent for; and it was determined that the opening should be enlarged, which was done, and several more of larger size were extracted. The wound healed, and the lady lived many years.

The origin of these osseous transformations of the ovaria must be explained upon the same principles that influence analogous changes in other organs. In consequence of the operation of causes, often diverse in their character, a perversion of nutrition takes place in the component structures. They require an increase of development; new materials are deposited in their substance; and their proper texture becomes either notably altered, or it is transformed into one of a totally different character. The fibrous tunic of the ovaria seems to be the part most prone to take on ossific transformation, but in undergoing this change, it first becomes thickened and indurated, then cartilaginous, and finally bony. The pathological condition in question is not, however, confined to this structure. There is some reason to suspect that the delicate membranes surrounding the Graafian vesicles, which we know are very liable to become the seat of enormous watery accumulations, as in the encysted forms of ovarian dropsy, not unfrequently participate in similar changes to those which take place in the external fibrous covering. Hence, it is common to find large watery cysts in the ovaria, the valves of which, very thick and resistant, are very frequently cartilaginous and osseous in certain portions of their extent.

In the cases quoted above, and the remarks offered, no reference has been made to those pathological states of the ovaria, in which bones and teeth have been found in these organs. Such instances are entirely different from those which form the subject of this communication, as they originate from causes of a totally dissimilar nature. Such bones and teeth, when found in the ovaria, owe their origin, either to an extra-uterine conception, or to a conception by inclusion, one germ being included within another, the one including only coming to perfection.

CASE XIII. *An immense ovarian tumor, in which the patient measured eight and a half feet around the body, and five feet from pubes to sternum.* By G. K. Holloway, M. D., then of Warrenton, Georgia. Southern Med. and Surgical Journal, 1838.

Mrs. Bush, of swarthy complexion, blue eyes and black hair, about five feet eight inches high, of nervous temperament but good constitution, was

what might be termed a laboring woman—inasmuch as she had to perform all the domestic drudgery of a large poor family—the mother of seven children, was in the month of February, 1836, in the 37th year of her age, attacked with cynanche parotidæa (or mumps); it being washing week she omitted that part of her business, but the next week labored hard at the wash-tub and got pretty wet. In the evening of that day she was somewhat feverish, and at night discovered that the mumps had returned, and in the night experienced an acute pain immediately in the region of the ovaria, or, as she said, high up in each groin, which (acute pain) continued with more or less violence for a long time, with a gradual enlargement of *apparently* two hard bodies, as she thought, which gradually increased in size for a very long time; attended in the first instance with apparent ascites, and in the latter part of her illness, which was long, protracted, excruciating, severe, and very painful, with hydrothorax.

During the major part of the time *she had no treatment, or perhaps, more properly speaking, she was allowed to have no treatment, not even that of decent humanity.*

On the 15th of December, 1836, we saw her for the first time, and were not a little surprised to find a human being alive in her then situation; she was swelled beyond anything of which we had any idea, and had *evidently* a large collection of water in the abdomen, and *apparently* two hard oblong round bodies extending nearly across and meeting in the centre of the umbilical region. We immediately advised paracentesis abdominis, which was declined from the fears of our patient, as she appeared at that time very reluctant to quit this vain world. We honestly set before her all the chances for and against recovery, which were received with perfect *sang-froid*. Our advice being declined, we left her the compound powder of supertartrate of potassa and jalap, with orders to use it so as to keep her bowels freely open; and recommended sleep to be procured by the judicious use of laudanum, for sleep she could not. With these directions we made a gratuitous tender of our professional services, which were declined both by herself and husband. In the spring of 1837, we believe it was in the month of April, we were again requested to visit Mrs. Bush, and if on our first visit we were surprised at her situation, we were now more than astonished at her enormously increased and unwieldy size. On examination we found that the (*apparent*) two tumors had met, or rather, more properly speaking, passed each other, and so very completely filled up the abdominal cavity, that upon using the usual and common test in those and similar cases, we could discover no collection of water. I began to think that we had mistaken the disease or its nature, if we had not been very positively confident that at the first examination we *could and did discover a fluctuating fluid* within the abdomen. We again recommended tapping as the surest means of affording relief, as the breathing was stertorous and laborious; pulse very quick, and the countenance haggard in the extreme with great anxiety, but implicitly and positively gave it as our opinion that no cure could be effected or expected at this time. The whole system wore evident marks of general dropsy, and the inferior extremities were enormously distended, and a *fluid could be heard upon the patient turning herself in different positions*. Our advice was again rejected, but whether from choice or tutoring is to be inferred from the fact, that the common necessary comforts of life were withholden by a *most loving and affectionate husband*. *Death was not then so near at hand, in his humble opinion, as to render it certain that life would become extinct on the performance of an operation.* His victim must yet suffer a long time, although death would then have been a welcome friend. We departed, and report says that things continued to assume an aggravated aspect with increased violence, till the month of February, 1838,

when we were again requested to visit the wretched sufferer, who was swollen beyond description. Again tapping was recommended as the only means of affording any possible chance of relief, but with this assurance in our opinion (for the pulse was rapid, quick, thready, and very feeble), that the operation would now be productive of instant dissolution; but at the same time that we gave such as our opinion, we said that it was *possible* that such might not be the fact. To this Mrs. Bush did not object, neither did her *truly affectionate* husband, but some superstitious old woman coming in, said that they had "heard a banshee crying all night," and they were certain that if Mrs. Bush was tapped it would kill her.

The wishes of Mr. and Mrs. Bush were overruled by witchery and superstition, and Mrs. Bush was left to suffer all the direful and distressing affections of tumors and hydropic diseases and the morose imagination of a *most affectionate* husband, whose only regret was, that the Father of mercies had not sooner relieved him of his constant trouble, a most truly honest and affectionate wife. On this occasion Mrs. Bush fully opened herself to us, complained of the bad, harsh, and hard treatment of her husband, but like a Christian she forgave her persecutor, and requested that at her death we would make an examination of her body and report her case, if it was worth reporting, to the world. This we promised, and so far as comports with our humble ability we now perform and redeem that solemn promise.

She departed this life, as we have been informed, at 4 o'clock P. M. on Friday, the 1st of June, 1838; and at 11 P. M., precisely seven hours after death, in the presence of Drs. Wm. P. Butt, Jas. S. Jones, E. M. Pendleton, and students Jas. W. Wilaer and A. Paris, we commenced the *autopsy*. The general appearance of the subject presented nothing worthy of remark, if we except the appearance of the tumor, the emaciation of the chest, face, superior and inferior extremities, which were literally nothing but skin and bone; countenance haggard, hippocratic, and greatly dejected. Calculating to find a large quantity of water in the cavity of the abdomen, we made a puncture with the trocar and canula in the most prominent part, which was about two or three inches below the umbilicus, after which, upon drawing the trocar from the canula, not a drop of fluid escaped for a second or two, and then we were somewhat surprised to see a dirty, thick, curdy, tenacious, brownish fluid or pus, come dropping out. Finding that the case was different from what might be, or was expected, a crucial incision was made in the usual manner. Upon cutting through the parietes of the abdomen, we came to the tumor closely adhering to the peritoneum, and extending longitudinally from a considerable way below the pubes to above the ensiform cartilage, and laterally from the anterior superior spinous process of the ilium on one side, to that of the other, and very nearly filling up the entire cavity of the abdomen. At first view there *appeared to be two tumors*, but upon cutting and examining, it was discovered that there was but *one tumor*, but that one was somewhat inclined to be double. The external appearance of the tumor might be said to be convoluted and globular. Where the tumor was cut into, it was evidently somewhat cellular, and some of those cells contained an albuminous matter, some a gelatinous matter, and some contained a semi-fluid very much resembling, both in color and consistency, semen or sperm. In dissecting out the tumor, we came at last, in the posterior part of the abdomen, to a large quantity of dirty-looking coffee-ground colored thick water, which was collected in tubs, and from appearance we would say twelve gallons at least. The tumor when dissected from the body weighed twenty-one pounds. The following is the size of the tumor, as measured in the presence of the attending gentlemen:—

	Feet.	Inches.
Circumference of the tumor around the abdomen	4	10½
From symphysis pubis to ensiform cartilage	5	8
From vertebrae to navel	4	3¾
Or around the body	8	7½

The contents of the thorax, abdomen, and pelvis, were in turn respectively and separately examined. In the thorax there was a large quantity of bloody water, at least two gallons. Lungs natural, and heart considerably smaller than natural. In the abdomen the intestines were generally inflamed, but not extensively; the spleen, pancreas, and liver, somewhat enlarged; kidneys normal. In the pelvis, the contents generally not diseased, the right ovary enlarged so as to weigh twenty-one pounds; the right Fallopian tube as large as a large sperm candle, the left ovary and tube of natural size, the uterus somewhat enlarged, but healthy in appearance, with a patulous mouth. The corpora lutea apparently injected with venous blood, but otherwise healthy.

The abdominal contents lay entirely behind the tumor. We were promised a drawing by an artist, but causes not within our control have delayed and prevented its reception, although we used every exertion in our power to procure the same.

CASE XIV. *Ovarian dropsy cured by a simple operation.* By John Douglass, M. D., of Chester, South Carolina. *Charleston Med. Journal and Review*, 1851.

This operation certainly contrasts very favorably with the dreadful and imminently hazardous one, now no doubt, too often resorted to, both in this country and in England. We are surprised that it has not attracted more attention.

The subject of the following case was a negress (slave), the property of Mr. S. C., of Fairfield District, S. C. She was about thirty years of age; had never borne children, and was said to have been rather notorious for sexual indulgence. Her general health had been always good, until about three years before I operated; she then had occasional attacks of pain in the uterine region, with spasm, nausea, etc., which for a year or more were attributed to menstrual irregularity, or other utero-ovarian derangement, arising from her dissipated habits. Between one and two years after this first disturbance of her health, a tumor was felt in the right side, pretty well corresponding with the ovarium.

Different modes of treatment had been tried, in accordance with the conflicting views of those who were called on to prescribe for her. From the extreme hardness and firmness of the tumor, it was treated first as simple chronic inflammation of the ovarium or tube; again, as a malignant enlargement. Nothing, however, retarded the development of the disease; and in the spring of 1848, I was called in, mainly for the purpose of removing the enlarged and painful ovarium.

After a few weeks' attention, I determined to introduce a trocar and leave the canula in the wound, believing that frequent blistering and other stimulating applications had produced firm and perhaps extensive adhesions. Accordingly, in June, 1848, assisted by Dr. J. L. Douglass, I made a free incision over the most prominent part of the swelling, near the linea semilunaris, down to the sac; I then plunged in the trocar: about three or four quarts of a thin fluid, resembling milk and water, were discharged. I then plugged a canula, confining it *in situ* by the most simple means. Once a day, for a few days, the plug was removed, which gave exit to a pint or more of the same kind of fluid; after which, the canula was left open, and carefully taken

out and cleansed every three or four days. The discharge continued for eight or ten days, without any change as to quantity or quality. It then began to diminish in quantity, and change its appearance gradually to a healthy-looking pus. By the first of August, she appeared so well that I removed the canula. A very slight discharge of healthy matter continued until December. She went to her ordinary labor on the plantation, however, in October, and has continued in good health. She had been able to labor but little for two years before, and for several months had been constantly laid up.

SECTION XIV.

IMPERFECTLY DEVELOPED FŒTUSES.

CASE I. *A child aged two years and nine months pregnant with her sister; death.* By Dr. Edward B. Gaither, of Springfield, Kentucky. New York Medical Repository, 1810.

Haller, the celebrated professor of Gottingen, and author of that great work, the *Elementa Physiologie*, has mentioned the subject of fœtal impregnation in his eighth volume, p. 93. Although he admits the reality of conception in many cases, without sexual intercourse, and independent of all genital connection, he hesitates to admit the cases alleged to have happened in quadrupeds, by Nigrosoli, Labat, Marigli, and Aristotle. And he considers the facts adduced to support such occurrences in the human species, as doubtful tales. Yet he quotes Rzascynski's *Natural History of Poland* for an example of a female child who was pregnant when she was born. The distinguished Otto contends at great length and with much accuracy in support of the instance, recorded in the *Ephemerides Naturæ Curiosorum*, of a new-born babe herself bringing forth. Thomas Bartholine relates a dissection wherein a pregnant fœtus was found within the mother. There are authorities in *Mangel's Bibliotheca* to the same point. Schurig and more recently Lentin, have collected a variety of similar occurrences. Haller himself recites what he terms a recent case of a child that appeared to have been born with a gravid belly. Indeed a *congenitum monstrum*, or monstrous production coeval with the body in which it is produced, seems to have frequently obtruded itself with all its embarrassing and humiliating accompaniments, upon public notice. After remarking these things, the inquirer of the present day may, indeed, agree with the noble Baron of Berne, "Si vera hujusmodi exempla sunt, redibit homo in conditionem aphidis, quæ et ipsa gravida nascitur"—If these things are true, the human species must be ranked with the aphid (a prolific and troublesome insect), which is born pregnant.

We regret not being able to ascertain who this is.

On the 7th of April, in the county of Washington, I was called to visit a female child, the daughter of John Milbourn, jun. The child was two years and nine months old, and was supposed to be affected with ascites or dropsy of the belly. She died about three hours after my arrival.

Her parents gave me a detailed account of her case, and its various symptoms. I was by no means satisfied that it was a real dropsy, though there were great tumefaction and tenseness of the abdomen, and fluctuations evidently felt when pressed by the hand. But as the symptoms were some of them inappropriate to the disease, and others equivocal, I could not but suspect that her disease had been either unknown or misconceived. I therefore prevailed on her parents to permit an *examination*. The opening was performed in the usual way by a longitudinal incision, from below the sternum and reaching nearly to the pubes; and a transverse one passing through the epigastric sides.

A cavity was opened at about half the distance between the abdominal cavity and the exterior surface, that discharged between three quarts and a gallon of yellow water, which smelled like rotten eggs. Within this cavity was found a monster, or *imperfect child*, and also an animal substance of a whitish color. The monster weighed one pound and fourteen ounces. The substance weighed two ounces, was rather of an oval figure, and was connected to the child from which it was taken, by a cord that had some faint resemblance to the umbilical. On one extremity of the substance is a small teat or protuberance about half an inch long, and between one-fourth and one-half an inch in diameter, and immediately by it is hair of a darkish or auburn color, about an inch and one-fourth long. The only analogy it bears to the human skin is, that it is covered by the epidermis.

The monster occupied part of the epigastric and the umbilical regions. It was not connected to the inner surface of its cavity by a cord or any visible medium. Whether a cord or other medium of connection had existed and been destroyed by putrefaction (which from the smell of the fluid and other appearances had commenced) could not positively be ascertained. That there must have been some medium of connection I am assured as well by the universal course of nature and analogy on this subject, as by an appearance at the articulation of the cervical and dorsal vertebræ, resembling faintly the divided funis.

The position of the monster in its envelope was awkward. Its thighs are drawn up to the abdomen and attached to it in places; the left resting on the shoulder and reaching as far as the back part of the head; the right resting or pressing on the back of the right hand; the bones of each thigh have perforated the flesh at the knee, and are about half an inch out. The left leg is imperfect, and lies back along the thigh, to which it has grown. The right leg is also imperfect, its foot is suspended over the head. On one foot are three toes; on the other a small appearance of two. From the knees to the shoulders there is considerable perfection of form. Its sex is indistinctly marked; the indications are of the feminine. The left arm should rather be called a stump than an arm, it has no hand; at the end of the stump is a nail. The right arm is large and long, it has three fingers and the thumb. The head is very imperfect; it rests upon the breast between the knees. It has neither ears nor eyes, nor appearance of any substitute for either; no mouth nor anything that has a near resemblance to it. There is on the left side of the face, or rather that region of the head which the face should occupy, a small prominence which contained three teeth, one canine and two incisors; they are about the size of the teeth of a child of two years old. This prominence or mouth, if it may be so called, has no aperture. On the back part of the head is hair of a dark or rather of an auburn color, eight or nine inches long. The body of the monster is 7 inches long and 10 inches in circumference. The thighs 6—8 inches in circumference. The arm 5 inches long; the stump not quite 4 inches in length.

The interior of the cavity which contained the monster, resembled the membrana decidua. This appearance was assumed, for upon examination there was not any vestige of membrane peculiar to the monster discovered. Having explored this cavity and dislodged its contents, I extended the incision through the muscular partition into the abdominal cavity, and examined the viscera. They were rather pale, otherwise natural.

The little girl that these monsters were taken from, for about nine months was healthy. Her parents discovered when she was only a month or two old, something hard within the abdomen which continued to increase. After this time she became less healthy; but her complaints were those incidental to all

children. About nine months prior to her death, she began to decline and became emaciated; her appetite continued strong; her longings and desire for ardent spirits were great; she would become intoxicated if indulged in the free use of them; it took a considerable quantity to affect her; she drank freely an hour before her death. I believe it was the use of spirits in part that supported her so long. She was of the ordinary size of children at her age, had dark hair and eyes, and would have been handsome, but for a gloom and melancholy that sat upon her countenance, which made her appearance peculiarly interesting. She looked like the child of grief. Her countenance exhibited evidences of a good understanding, and her little tongue confirmed it.

CASE II. *Tumor in the rectum containing the débris of a fetus; extirpation.* Lancet, 1850.

M. Bouchacourt, chief surgeon of the Charité of Lyons, communicated to the Academy of Sciences, on the 26th of August last, the case of a little girl, six years of age, from whom a tumor of the rectum was extirpated, which contained the débris of a fetus. This case belongs to the *endocymian monsters* of Geoffroy St. Hilaire. Since the case related by Velpeau, in 1840, this is the only monstrosity of the kind which has required a surgical operation. The tumor was removed by excision and the ligature.

CASE III. *A testicle containing fat, hair, bony and cartilaginous formations; castration.* By J. W. R. Tilanus, M. D. Virginia Medical and Surgical Journal, 1855.

Dr. Tilanus's case is that of a young man, aged 20, otherwise in good health, whose left testicle, even at the earliest period of life, appears to have been larger than the right; along with this, hydrocele existed. The testicle gradually increased in circumference, and, a fortnight before the date of the observation, had, after a fatiguing walk, become much larger and more painful. An exploratory puncture having been made, about six ounces of a milky fluid were discharged. The testicle was now twelve inches in length and six in width; posteriorly and inferiorly, it was firm and hard; anteriorly, it was indistinctly fluctuating; the spermatic cord, inguinal glands, and skin of the scrotum were healthy. A congenital fibroid cyst was diagnosed.

Extirpation was successfully performed under chloroform by Heer de Waal Malefyt. The testicle, which was still entirely surrounded by the tunica vaginalis, filled with a sanguineous fluid, consisted of two cavities, separated by a firm partition of one inch in diameter, towards which the cord ran. The lower cavity contained six ounces of a thin, milky, flaky fluid; its wall, which consisted of areolar tissue, was covered on the inside with epithelium. The other contained a small quantity of fat, and was filled with a ball of hair as large as a man's fist, with fat (crystals of margarin and oil globules); the hairs were long, well formed, and furnished with bulbs; the wall was in parts covered with epithelium and smooth, in others it was rough with deep depressions, out of many of which long hairs arose. The others were the openings of empty hair follicles. This part consisted of well-formed skin, with layers of epithelium, chorion and adipose membrane, in which last lay numerous sudoriparous and very large well-filled sebaceous glands. The wall further consisted of layers of fibrous tissue. On the partition between the two cavities was a crest-like projection, formed of cartilage, with large and small cartilage cells and transparent intervening substance. Lastly, in several places were very thin laminæ of bone, in which lay scattered bony corpuscles of irregular form. No trace of the substance of the gland was to be found.

CASE IV. *An imperfectly developed foetus in the right testicle of an infant; castration.* By Dr. Michaelis. *Lancet*, 1826.

In the village of Tscheplau, near Glogau, in Silesia, in the month of December, 1817, a tailor's wife was delivered of a healthy child. Some time after, the child was troubled with a difficulty in passing its urine; and on the 13th of May, 1818, it was put under the care of Mr. Lambe, a surgeon at Glogau, who, on examining the genitals, found a natural phymosis, and the right testicle hard, and much increased in size. He did not think it advisable to perform the operation for phymosis immediately. The testicle continued to increase in size, so that on the 19th of June the scrotum hung down to the child's knee. The swelling was irregular, hard, cold, and painful to the touch. On the 9th the above-mentioned surgeon performed the operation of castration, and tied the spermatic cord near the abdominal ring. The ligature separated on the third day after the operation, and the wound healed so well that early in August the child was perfectly recovered.

The testicle weighed seven ounces, and measured four inches three lines in length, and two inches four lines in breadth. The other testicle was wanting altogether. The tunica albuginea of the testicle was of a yellowish color, and filled with a fatty mass. On making an incision through the tunica vaginalis, the knife struck against a hard substance, which on being extracted and carefully examined was found to be a small thigh bone without the periosteum; it was an inch and a half long. The testicle was more accurately examined, and in it were found many bones connected together by cellular membrane, and muscular fibres, the pelvis which appeared to belong to a foetus of about four months, and a foot consisting of skin, muscle, and bone. On the sides of the pelvis were the ossa ilii, with the lineæ semicirculares. Under the latter was observed the edge of the acetabulum, which has here a triangular shape. The ligamentum teres was wanting. The promontory of the os sacrum, and its articulating surface connecting it with the last lumbar vertebra, were distinctly seen.

In the middle of the pelvis was a stringy substance, shaped like a mulberry, one inch long, and one-third of an inch broad, which appeared to be the embryo of the lumbar vertebra. In the right acetabulum was an os femoris without periosteum, and more flat than round. The neck of this bone was wanting; but under its head were some bony concretions, sufficiently formed to be recognized as the trochanter major and trochanter minor. At the inferior part of the os femoris were the inner and outer condyles, and the tuberosities of both condyles were visible. At the left part of the pelvis the pubes and ischium were wholly wanting, but the crista of the ilium was well formed. The inner surface of the ischium was concave, the outer convex. Under the semicircular line a thigh bone, three-quarters of an inch long, took its origin, which at its inferior extremity was reflected towards the knee, where there was a marked protuberance. The tibia and fibula might be plainly seen, and the interosseous ligament was stronger than it usually is in the foetus. The foot was of a cartilaginous structure; the toes were not developed, and it was a little turned back at the point. The posterior part of the pelvis was bent. At the superior part of the os sacrum some of the processes and sebaceous glands might be discerned.

CASE V. *Foetus in fœtû.* *Lancet*, 1827.

A young healthy woman of this place (Hanover) was brought to bed, without any assistance, of a six or seven months' child on which the following malformation was observed: On that part of the child where the orificium ani is usually situated, there was a large membranous bag, which, together

with its contents, had already proceeded to an advanced state of putrefaction. It contained something very similar to a placenta, which was connected by almost imperceptible threads to a dead foetus of about four or five months. The foetus was unfortunately very much changed; still several parts were distinct, as the head, face, vertebrae, and sacrum.

The membranous bag, which, to a certain degree, occupied the place of a uterus, was connected to the posterior part of the sacrum of the child.

CASE VI. *A human foetus developed in the mesentery of a boy fourteen years old; death.* Baron Dupuytren's Lectures. *Lancet*, 1833, vol. xxiii.

Amédée Bissieu, son of M. Bissieu, of Verneuil, department de l'Eure, was born in 1790, of a young, well-formed, healthy woman, who had previously borne another child, well formed and of good constitution. On the night during which his mother supposes he was conceived, one of the alarms then so frequent in France threw the town into violent agitation, and called the inhabitants tumultuously to arms. During her pregnancy, Madame Bissieu experienced some mental afflictions, as well as frequent indispositions; nevertheless her labor was propitious. It was supposed that during labor an unusual quantity of water escaped through the vagina. Immediately after birth the infant was confided to a nurse, who, finding him weakly and unhealthy, almost despaired of bringing him up. Returned to his father's house, he complained, from his first lisp, of pain in the left side of the chest and belly. The volume of these parts was so considerable, that it was feared he labored under organic disease; but the size was, nevertheless, so variable, that nothing was done beyond accommodating his clothes to these variations. However, as he grew up these fears subsided, but the boy's body continued thin; he continually complained of slight pains in the side; his appetite was fantastic and irregular, and he frequently suffered from indigestion. On dressing him one day it was perceived that two of his left ribs were more elevated and prominent than the others; but this was attributed to the effects of a habit he had contracted of sucking the right thumb, and inclining his body to that side. Still less attention was excited by the circumstance, as at this time the lad was distinguished for a degree of gayety, vivacity, and intelligence beyond his age. He was sent to a boarding-school at Rouen, where having spent 18 months, he was suddenly attacked, on the 13th Nivose, year 12, with acute pain in the side and left hypochondrium, with continued fever, with exacerbations, and a feeling of oppression. Great swelling of the pelvic region also occurred. He was bled and purged. The fever continued and the swelling made progress. On the 7th day of his illness, M. Blanche, the surgeon, perceived distinctly in the abdomen a hard and very painful tumor extending along the false ribs to the crest of the ilium, rounded from side to side, and of the size of a large melon. Calming treatment was employed, but the pain did not diminish until an abundant purging of fetid purulent matter had taken place. The marasmus, however, proceeded, and after some months' useless treatment he was sent home. On his arrival, MM. Guérin and Bertin Desmardelles recognized the tumor. A continual cough soon occurred, accompanied by purulent and fetid expectoration, and a purging of matter also fetid, in the midst of which, six weeks before his death, was found a parcel of hairs rolled up on themselves. He died on the 53d Prairial, an. 12, six months after the attack at Rouen.

Autopsy.—The opening of the body took place next day, in the presence of MM. Guérin and Bertin Desmardelles. These physicians discovered in the left hypochondrium, below the spine, a large, thick, membranous sac, adhering to all the surrounding parts, and especially to one of the large intestines, which they presumed to be the colon; and in this cyst, amidst purulent, thick,

and yellow matter, were two masses of nearly equal volume, situated transversely before the vertebral column, one applied to the other, but, nevertheless, quite distinct. Of these two masses, one, placed inferiorly, was composed of a large handful of tangled, felted hair; around this were two little parcels of hair, like that which passed by stool six weeks before death. The other mass, situated higher, consisted of an oblong, fleshy, and bony substance, covered with skin. At one of its extremities was seen an imperfect head, with hair, teeth, a deformed nose, a kind of orbit at one side, and an ear at the other. At the opposite extremity was a limb-like appendage, ending in some tongue-shaped points armed with nails. Lastly, from the centre of the mass proceeded a thick, short ligament, inserted into the parietes of the cyst.

Deeming the case deserving of more minute researches, MM. Guérin and Desmardelles lifted the fleshy mass out of the pelvis, and took it away, together with the stomach, spleen, and a part of the large intestine. They ascertained then that there existed no trace of sexual conformation, external or internal, and that the sex of Amédée Bissieu was indisputably masculine. Lastly, they found on dissecting the rest of the body, that the liver was very voluminous, and the lungs whitish and infiltrated with pus. Twenty-two days after this, the body was exhumed, in order to verify the facts now related. MM. Delzeuzes and Brouard, who were charged with the investigation, found no trace of any sexual organ but those belonging to the male. The bladder was cautiously separated, the vesiculæ seminales discovered; the rectum examined internally and externally, and nothing extraordinary found. Lastly, the external parts of generation were carefully inspected, and the testicles, vasa deferentia, and penis, were found to be perfect in formation, but small in size.

Remarks on the case.—A fact so extraordinary excited universal attention, and M. Blanche forwarded the preparation to the Faculty of Medicine of Paris, and I (said M. Dupuytren) was commissioned to report on this great anomaly in the laws of nature.

The first fact I ascertained relative to the position of the fœtus was, that it lay in a cyst of the transverse mesocolon, which had only communicated very recently with the intestine, through the destruction of a partition by which they were separated. In continuing this examination, I ascertained that the organized mass contained in the transverse mesocolon had many points of resemblance to a fœtus, but that it offered also numerous peculiar dispositions, some of which depended essentially on vices of conformation, while others appeared to be dependent on changes of form successively effected by time and the sojourn of the mass in the mesocolic cyst. The dissection of the mass was, however, the surest mode of determining the nature of this production. I did so with great care, and I discovered the trace of some organs of the senses, a brain, spinal cord, very voluminous nerves, muscles degenerated into a sort of fibrous matter, a skeleton, composed of a vertebral column, a head, a pelvis, and the rudiments of almost all the limbs. Lastly, in an umbilical cord, very short, and inserted into the transverse mesocolon, beyond the cavity of the intestine, an artery and vein ramified in each of their extremities in the fœtus, and the individual to which it belonged.

The existence of these organs sufficed certainly to establish the individuality of this organized mass, although in other respects it was destitute of organs of digestion, of respiration, of the secretion of urine, and of generation. But the absence of these parts, at most, could only render it one of the monstrous fœtuses destined to perish at the moment of birth.

We shall not dwell on suppositions, more or less problematical, advanced respecting the presence of this fœtus in the body of the young Bissieu. We shall only remark, that it is by no means rare to see twins born adhering by

the back, belly, head, or by several parts at once. A degree of compression, more or less strong, exercised by the mother's organs on the soft embryos, either during conception or soon after it, may produce these monstrosities. In other cases, not extremely rare, the twins are so identified, that many organs are deficient in each, and are replaced by common organs, which serve for the existence of both individuals. In the first case, the monstrosity depends on a mechanical cause; in the second, it depends on a primary fault in the organization of the germs. One of these explanations, being admitted, the sex of the individual who so long acted the mother to the fœtus in question, becomes altogether indifferent. The fœtus has progressed, but as extra-uterine conceptions do. In fact, to whatever part the fecundated germs are attached, their mode of nutrition is the same. They derive from all, by means of proper vessels, the nutritive fluids they require. They are developed, and increase in size, until the time ordained by nature for their expulsion, and if they cannot then be expelled, they putrefy and turn into adipocire; they dry, and become ossified, or else they vegetate until their presence, by irritating the adjoining parts, determines the formation of abscesses, and procures their discharge. Such is what seems to have happened in the case before us.

CHAPTER IX.

OF THE EXTREMITIES.

SECTION I.

FRACTURE.

CASES I to VI. *Spontaneous fractures.* The following six cases we derive from the July No. 1852, of the *New York Journal of Medicine*—furnished it by Professor Willard Parker, M. D., of the College of Physicians and Surgeons, through Dr. Stephen Smith.

CASE I. *Fracture of the os brachii, at the insertion of the deltoid muscle, in a colored preacher while in the act of gesticulating.*

I was called in consultation with Dr. Sargeant, in July, 1844, in the case of Mr. R. Jackson, a colored minister of the Methodist denomination, who was suffering from a fracture of his right arm. He was of a stout build, very muscular and well developed, thirty-eight years of age, having no hereditary predispositions, and had never previously suffered a fracture of any of his limbs. There was no circumstance connected with his history giving evidence of unnatural fragility of his bones. The accident occurred while warmly engaged in an exhortation in a religious meeting, and upon making a violent gesticulation. On examination, the right humerus was found broken at the attachment of the deltoid. Union took place in the usual time.

CASE II. *Fracture of the right clavicle upon striking a dog a severe blow with a whip.*

This accident happened on July 14th, 1845. The patient, Mr. George Potts, was a mulatto, aged 35, a native of the West Indies, of a scrofulous habit; vivacious, active temperament, and very intelligent. He was fond of sports, and spent much of his time in hunting. In one of these excursions, in attempting to strike his dog with a heavy whip, the clavicle was fractured at about its inner

third. On examination, the bone was found enlarged at the point of fracture, and was evidently in a diseased condition. He had been under treatment previously for scrofulous affections. The bone united favorably, but he died three years after, of phthisis.

CASE III. *Fracture of the os brachii in attempting to throw a peach.*

September 17, 1849, I was called to see Mr. J. C. of Brooklyn, L. I., having a fracture of the right arm. Five years previously, this patient contracted syphilis, for which he was treated; he has since taken iodide of potassium pretty freely for the same disease. In other respects, he is of a healthy constitution, a fruit-dealer by occupation, and has no hereditary taint. This accident occurred upon flinging a peach, in the market, at one of his workmen. Union of the bone was prompt and satisfactory, and this arm is as useful as ever. His health is now robust.

CASE IV. *Fracture of the tibia, femur, and clavicle.*

This patient, Miss K. P., of good constitution and healthy parentage, when between three and four years old, suffered a severe and protracted course of whooping-cough. Before she had recovered from this affection, she was attacked with measles, about the middle of December, 1844, during which the lungs became implicated, and her life was despaired of. She, however, slowly convalesced, and during the spring following, 1845, took iodide of potassium and iron, for general treatment. Her health became in some degree established in the course of the following season. In February, 1846, upon stepping down a stair of six or eight inches, the right tibia suddenly fractured, the fibula remaining unbroken. The fracture was treated in the usual manner, and united favorably; her health still continued delicate, and her constitution feeble. In July following, while in the country for her health, she accidentally slipped upon a rind of pear, and the result of the sudden movement was a fracture of the thigh of the same side, about the junction of the middle with the lower third. This fracture also readily united, and the limb has now its usual strength. Since this accident, she has had chronic synovitis of both knee joints. She had nearly recovered from this affection, when, in November, 1851, she met with a slight fall upon her shoulder, and fractured the clavicle. This united, and now, at the age of eleven, her health seems established.

CASE V. *Fracture of the right femur; non-union; death. Cancer of the lungs, and cancerous degeneration of the extremities of the fragments.*

Miss E. S., fifteen years of age, with no hereditary predisposition to disease, apparently in the enjoyment of substantial health, highly educated, and of a nervous temperament, has had, for upwards of two years, a small tumor, of the size of a walnut, on the inner aspect of the thigh, directly over the femoral artery. It has never caused her any inconvenience; it is painless, and the lymphatic glands of this region have no appearance of being diseased. In December, 1850, while descending a staircase, and in making the last step, the thigh bone of the right side gave way and she fell helpless to the floor. The fracture was at the junction of the middle and lower thirds. During the first eight days, she had an attack of measles, but nothing occurred worthy of note. The fracture was treated in the straight position, and at the end of the fifth week the bone seemed united. During this time, however, the tumor of the thigh increased in size and ulcerated; the nervous system became involved, and her extreme irritability had frequently to be controlled by chloroform; and finally, upon starting from her sleep, the thigh was refractured in the

former situation. The general system now sympathized more acutely, emaciation followed, the pulse became rapid, severe neuralgia constantly harassed her, and at length, about five months after the first accident, death put an end to her sufferings.

Autopsy.—Great emaciation; tumor, a large encephaloid growth in the second stage. Lungs both filled with cancerous masses, varying from the size of a shot to that of a walnut. In the thigh the callus had been removed, and an irregular encephaloid mass occupied its place; cancerous matter was also found deposited in the lower part of the shaft of the femur, and about the knee-joint; it was detected in no other organs of the body.

CASE VI. *Fracture of the right os brachii in attempting to extract a tooth with the key.*

Mr. C., aged 38 years, an apothecary by occupation, fractured the right humerus in attempting to extract a tooth. Patient states that for more than a year he has suffered more or less pain at the seat of fracture, that the bone has seemed to him weak at this point; and he has been in the habit of avoiding using it when any effort was required, for fear it might break. During this time, the bone has been much enlarged in this place, and he has taken pretty constantly iodide of potassium, for the relief of nocturnal pains in his head and limbs. He has nodes on his head, and these, with the enlargement of the humerus at the point of fracture, and the peculiar pains, mark it as a genuine case of tertiary syphilis. The bone united readily, but still remains very weak and quite useless. Much less than the ordinary amount of force was used in extracting the tooth.

CASE VII. *Twenty-four fractures in a patient before he was twenty-three years old.* By Wm. Gibson, late Prof. of Surgery in the University of Pennsylvania. *Institutes and Practise of Surgery*, vol. i.

A patient of mine, a Mr. Green, residing near Trenton, in Jersey, has a son now nineteen years of age, who from infancy up to the present period, has been subject to fracture from the slightest causes, owing to an extraordinary brittleness of the bones. The bones of the arm, forearm, thigh, and leg, have all been broken repeatedly, even from so trivial an accident as catching the foot in a fold of carpet whilst walking across the room. The clavicles have suffered more than any other bones, having been fractured eight times. What is remarkable, the boy has always enjoyed excellent health, and the bones have united without much difficulty or much deformity. The above was published in 1824; since then this patient died, in the twenty-third year of his age, from partial dislocation of the first and second vertebrae of the neck, after a painful illness of fourteen weeks. Altogether he had experienced *twenty-four fractures.*"

CASE VIII. *Numerous spontaneous fractures in an aged patient.* Gibson's *Inst. and Practise of Surg.*, vol. i.

Alexander Me—, a native of Scotland, was about seventy years of age, rather below the common stature, of ruddy complexion, neither lean nor corpulent, of a sprightly, though irritable and pugnacious disposition, and had always enjoyed excellent health. He was an inhabitant of Petersburg, Virginia, for twenty-five years, and was so remarkable for his great liability to fracture his bones, that if he was seen a quarter of a mile from his dwelling, it was very common to hear some one say, "There goes old Ellick; I will engage he will break some of his bones before he returns." He assured me that it always appeared to him from early infancy, that his bones were more

easily broken than any other person's, that he believed he could break the bones of the forearm at any time by pressing them between his thumb and forefinger, and that he had several times fractured the ulna, radius, os humeri and clavicles, in giving blows. None of his bones seem exempt from this extraordinary brittleness, for since my residence in P., I know of ten or twelve fractures of different bones. I think it probable that more may have occurred during the same period, for latterly, the accident having become very frequent, his domestics managed his case, having from their experience, become expert bone-setters. The tibia, fibula, and os femoris, have been broken several times from a sudden twist of the body, and from efforts to save himself from falls. His thigh bones have been broken when attempting to get on horseback. His ribs have also been frequently fractured from slight causes. His speedy recovery astonished all who were acquainted with his case, for seldom, in any instance, has he been confined more than three weeks.

CASE IX. *Fourteen fractures in eight years' lifetime.* Gibson's Inst. and Practice of Surgery, vol. i.

Martin Stevenson, between three and four years old, fell from a step six inches in height, and fractured his thigh. When called to him his mother informed me that he had twice before fractured this thigh from very trifling causes. (She also stated that she herself had suffered from fracture once in the right thigh, and five times in the left. She first broke her left thigh, and found, upon recovery, that the right, from sustaining the principal part of her weight, was very painful, that at last it gave way on making a slight exertion, and shortened as much as the other had, during the cure, but has not been broken since. She also informed me that her brother, at thirteen, had suffered two fractures of one thigh and nine of the other, as well as two of the arm; besides which one of his hip joints had been dislocated; from all of which he was perfectly recovered, with the exception of the deformity.) Martin's thigh was firmly united in five weeks, and he was running about as usual. These people are of very short stature, and have small bones. Jan. 15, 1833, Martin, whilst eating his supper, fell from his chair, and fractured both bones of the forearm, for which he is at this moment under treatment. He is now four years and one month old, and has had four fractures. Eight years after this last date, the whole number of fractures which this patient had suffered was fourteen; no instance is related where muscular action alone caused the accident, though they were generally the result of the slightest external violence.

CASE X. *Thirty-one fractures in a girl only fourteen years old.* London Med. Gazette—American Journal Med. Sciences, 1833.

There was lately in Bird's Ward, Middlesex Hospital, an extraordinary instance of the facility with which the bones of the body are occasionally broken and reunited, in the person of Eliza M., fourteen years of age, who was admitted April 29, under the care of Mr. Arnott, for fracture of the right thigh, in consequence of a fall. This, according to the account of the mother, is the thirty-first fracture which her daughter has experienced, and the girl, who is quick and intelligent, states the particulars thus: The right thigh has been broken seven times, the left six; the right leg nine times, the left once; the right arm four times, the left three; and the left forearm once.

Eliza M. was about three years of age when the first fracture, that of the left leg, occurred from a fall, and she has never fallen since without fracturing a limb. But even this is not necessary, for she has broken a bone by merely catching hold of a chair, and sometimes in simply turning round suddenly.

She has a sister six years of age in whom there exists the same susceptibility, and who, since the age of eight months, has had nine fractures. In neither of the parents or their families has there been any similar disposition, nor in three others of their children, two boys and another girl.

There is nothing peculiar in E. M.'s appearance. She has delicate features, a fine skin, dark hair and eyelashes, and bluish-gray irides. The bones of the trunk and upper extremities present no alteration from the natural form, but those of the right leg are strongly arched forwards, and so is that of the left thigh; in a trifling degree this is the case with the left leg and right thigh. Besides the curve forwards, the bones of the right leg seem to be flattened laterally, as in *rickets*, but no curvature existed before the bones began to break. A variety of medicines were formerly tried in this case, with a view to remedy the great brittleness (as it has been called) of the bone; but the mother states that she never found them to be of the least benefit. She speaks, however, in strong terms of the advantages derived from a residence at the sea-side, and nourishing diet.

No difficulty has ever been experienced in getting the bones to unite—so little, that the mother has treated many of the fractures (those not attended with displacement), herself, and has of late sought surgical assistance only when the larger bones were broken. Thus the girl was in this hospital about two years ago for a broken thigh, and this interval is the longest she has ever experienced without a fracture.

The thigh bones, and those of the arm, have never broken without displacement; those of the leg have. It would seem as if, in the case of the latter, the fracture had not always been complete. Her health suffering, this girl left the hospital on the 28th of May, but Mr. A. mentioned the other day that he had since called at the residence of her parents, and found her doing well. The limb had been treated on the double inclined plane with splints, which were continued at home. E. M. does not walk without a crutch, and it was in consequence of this slipping that she met with her last accident; but Mr. A. found her sister, who has had the nine fractures, running about without any assistance of the kind, and in a state of apparently perfect health.

CASE XI. *Fracture of both arms during a paroxysm of epilepsy.* Gibson's Inst. and Practice of Surgery, vol. i.

In Jan. 1827, I was called to see Mr. B., a respectable man about forty years of age; he was seized with a fit, but when I arrived, had become tranquil; some medicine was directed for him, and as he was subject to epilepsy, I left him in charge of careful attendants. On my third visit, three days subsequently to his first attack, being alarmed at the contracted state of the pupil and other indications of disordered brain, a blister was ordered to the back of his neck, and upon removing his clothing a fracture of both arms was discovered above the elbows. Notwithstanding my investigations were made with the strictest scrutiny, I could not ascertain that the patient had received any injury either by falling out of bed or in any other manner. The only explanation I was enabled to assign for this strange occurrence was obtained from the report of his friends. They stated that during the night of his attack, while struggling in a fit, a very distinct noise or crack was heard, which, to use their own expressious, seemed as if he was breaking his bones. I have not the least doubt but that both fractures occurred at the time the noise was heard, from the force of muscular contraction operating on a system possessing some peculiarity in the organization of the osseous structure. This opinion was strengthened on mentioning the case to my senior colleague, Dr. Hendry, who had frequently attended the patient, and remarked at the time,

it was very common for Mr. Barrett to have his bones broken. In a short time the bones were carefully reunited.

CASE XII. *Spontaneous fracture of the femur.* Virginia Med. and Surg. Journal, 1853.

At a late meeting of the Medico-Chirurgical Society of London (Jan. 14, 1853), Dr. Van Oven related a case of spontaneous fracture of the femur, which occurred in his own person. On the 25th of May, 1852, he went to bed in perfect health, and fell into a sound sleep. At three in the morning he awoke in the act of turning, with a feeling of violent pain in the thigh, just above the knee. On putting his hand to the part, he felt the belly of the vastus muscle in strong contraction. At the same time a loud snap was heard. The swelling of the muscle subsided, and he could feel the grating of the two ends of the bone. It was found on examination that the femur was fractured transversely three inches above the knee-joint. A long splint was applied, and the limb was allowed to swing. The progress of the cure was regular and rapid. The splint was removed on the 9th of July; the patient could walk for an hour with the aid of two crutch-handled sticks on the 10th of August, and on the 30th of September he resumed his ordinary avocations.

Dr. Van Oven is 56 years of age; has led a regular life; is capable of considerable exertion; he is not aware of any hereditary tendency to disease; he has never had syphilis; nor has he ever been salivated. This case he considers to stand alone, and to be worthy of record.

CASE XIII. *Spontaneous fracture of the os brachii in an apparently healthy man.* By A. Hammer, M. D., of St. Louis, Missouri. St. Louis Med. and Surg. Journal, 1853.

Charles C. Sauter, resident of St. Louis, German, ætat. twenty-eight, occupation storekeeper, represents that he has been, during his life, remarkably free from sickness, and is not aware of any hereditary predisposition. He now presents all the evidences of good health, and, although below the medium height, being only five feet two inches high, possesses a strong frame, and a full muscular development. He states that, in the attempt to throw a stone five ounces in weight, at a goat which was eating the vegetables exhibited outside the door of his store, his arm was no sooner uplifted than it fell upon his forehead, the stone flying in quite another direction than the one intended. He immediately exclaimed to a bystander that his arm was broken.

A short time after the accident we were asked by our friend, Dr. Behr, to see the patient with him: an examination revealed a fracture of the os brachii at its inferior third, and about one inch above the articulation at the elbow. The starch bandage was applied, and the fracture is now, three weeks after the accident, united. The consolidation has taken place in a shorter time than usual.

CASE XIV. *Fracture of the right humerus by muscular action.* Calcutta Med. Quarterly—Lancet, 1838.

Robert ———, aged 41, volunteered from H. M. 30th Regiment, in 1828. Has been 23 years in the service, and 17 years in India. Previously to 1828 he suffered from dysentery, hepatitis, and fever; since the date above mentioned he has not been in hospital until now, and has enjoyed good health. Complexion swarthy.

Nov. 24. Admitted at the evening visit with much swelling of the upper

arm (right), and a very evident fracture of the humerus above the condyles; states that he met with the accident in throwing a long bullet, which he delivered over-handed, and without falling, so that the fracture must have been caused by muscular action solely.

The ends of the bone were placed in apposition; the forearm was flexed on the upper arm, and the limb supported on firm pillows, and kept constantly wet with the diluted lead lotion; splints were also *loosely* applied to steady the limb. He was bled to 24 ounces, and a purgative was administered.

25th. No sleep; the splints were slackened during the night, owing to the degree of swelling, which is considerable; medicine beginning to act. Lotion continued. Diet, soup.

P. M. Swelling but little increased since morning; is quite easy; five stools.

26th. Less heat and swelling; slept for two hours; one stool; tongue whitish; skin cool; pulse natural.

P. M. Arm hot and more swollen; slept five or six hours during the day; sixty leeches were applied, afterwards fomentations, then the lotion was resumed; one stool, scanty. Castor oil, ʒj.

27th. Slept pretty well; the leeches bled freely, and the arm is somewhat reduced; no stool; tongue white; pulse soft and natural.

The leeches, fomentations, and lotion were continued.

P. M. Quite easy all day; two evacuations from the oil; the limb lies comfortably, and is decreasing.

On the evening of the 28th, there being much increased heat of the limb, and the swelling not declining, sixty leeches were again applied.

29th. Easy all night; swelling decreased; no constitutional disturbance.

P. M. The swelling having declined considerably, it was necessary to re-apply the splints, which had become too loose.

Dec. 7. The bones remain in apposition; the splints again require adjustment; there is considerable swelling and discoloration, attended with pain around the elbow-joint; a bandage was now applied next to the skin, from the hand to the shoulder, and the splints fitted over it; bowels regular; general health good. Diet sp. chicken-broth; half lb. bread extra.

24th. On removing the bandage and splints, in order to reapply them, the arm presented its natural outline; union apparently has taken place. On the 9th he was allowed chicken diet.

Jan. 13, 1836. Union having taken place firmly he is discharged as a convalescent. The sick were at this time proceeding from Mirat to Gházipur by water. On the arrival of the regiment at Gházipur, March 1st, 1836, the arm was perfectly straight, free from deformity, and strong, and the motion of the elbow-joint was unrestricted and natural.

CASE XV. *Fracture of the thigh in attempts at reduction, after incomplete luxation on the dorsum ilii for seven and a half months.* By Prof. Malgaigne, of Paris. *Lancet*, 1838—vol. xxxiii.

A lad, 17 years of age, was admitted into the hospital with incomplete luxation of the thigh, upwards and outwards, which dated seven months and a half; the injured limb was not much deformed, but there existed a distance of half an inch between the head of the bone and the cotyloid cavity. For several days weights, gradually varying from 10 to 13, 24, and 45 kilog., were attached to the extremity of the injured limb, for the purpose of extending or breaking any cellular bands which might retain the head of the bone in its abnormal position. Two-thirds of the distance between the head of the bone, and its cavity had been thus accomplished, when more powerful means were had recourse to. A lever was firmly attached to the outer side

of the thigh, and the extending force carried to an equivalent of 200 kilog., but afterwards reduced to 140; the head of the femur was now brought down on a level with the acetabulum, the extending force suspended, and two assistants having bent the leg on the thigh, were directed to rotate the latter from without inwards; during this manœuvre the femur was broken across at its lower third.

CASE XVI. *The result of no treatment in fracture of the right thigh.* By Dr. Stratton. *Lancet*, 1842, vol. xliii.

A German, aged 35, was struck by a musket-ball, which perforated the middle of the right thigh, fracturing the femur. He was perfectly unmanageable, and would not allow himself to be handled, so that hardly any treatment was employed. Feb. 13 (three months after), the thigh was shortened four inches, and was about a fourth thicker than the left; the wounds in the soft parts had healed, and he was confined to bed in consequence of ascites and anasarca, of which he died on the 19th of April. This case shows the result of *no treatment*, and the amount of shortening in a fractured femur when left to itself.

CASE XVII. *Fracture of the left cervix femoris in attempts at reduction, after luxation on the dorsum ilii for seven weeks.* By Thomas M. Markoe, M. D., one of the Surgeons to the New York Hospital. *New York Journal of Medicine*, 1855.

Patrick Barry, aged 42, was admitted to the New York Hospital, Oct. 23, 1854, with a dislocation of the left femur, which had occurred seven weeks previously, by a fall from a rail-car while it was in motion. The symptoms were unequivocal, the limb being shortened $1\frac{3}{4}$ inches, the ball of the great toe resting on the instep of the sound foot, and the head of the bone being distinctly felt upon the dorsum of the ilium. The patient was a man of good muscular development, but the injured limb was somewhat wasted and flabby from inaction. Two days after admission he was put under the influence of ether, and Reid's manipulation was tried. The head descended as usual, until it came opposite to the lower margin of the acetabulum, but from that point, as the limb was brought down, it slipped on to the foramen ovale. The manipulation was repeated several times, with all care, varying the degree of abduction on the various trials, but without success. It was impossible to make the head rise over the lower border of the acetabulum so as to slip into its place. After numerous thorough and careful trials, the manipulation was abandoned and the pulleys ordered to be applied. Before this was done, it was thought best to place the head of the bone on the foramen ovale, and from that point to try and reduce it by the usual method recommended by Sir Astley Cooper. The head was accordingly placed on the foramen, and while the upper part of the thigh was grasped by an assistant and lifted strongly outwards, I took hold of the ankle and made extension and adduction. The head seemed not to move at all under this force, and while making strong adduction a crack was heard, everything became loose about the joint, and on examination it was evident that a fracture of the cervix had taken place, leaving the head on the foramen ovale. There was nothing further to be done but to put the limb up in the straight apparatus, hoping that, if we could obtain union, he would have as useful a limb as those ordinarily left by fracture of the cervix, and certainly a better limb than if the dislocation had been untouched.

Is not this a mistake? Dislocation of the head of the thigh-bone on the *dorsum ilii* is upwards, and on the *foramen ovale* is downwards, and this is

the precise classification of Sir Astley Cooper. How then can the change of position alluded to, to say nothing of the difficulty if not the impossibility of effecting it, favor reduction of the dislocation?

SECTION II.

DISLOCATION.

CASES I., II. and III. *Dislocation of the femur on the dorsum ilii, reducible without pulleys, or any other mechanical power, with three cases.* By W. W. Reid, M. D., of Rochester, New York.

It is right to give space to the American method of reducing dislocations of the thigh. Dr. Reid read an essay on this subject at the annual meeting of the Monroe County Medical Society, May, 1850, which was published in the August No., 1851, of the *Buffalo Med. Journal*.

"GENTLEMEN: I propose to show that dislocation of the femur on the dorsum ilii may be reduced without pulleys, without Jarvis's adjuster, without Fahnestock's twisted ropes, without an assistant, in less time, and with far less pain, than by any mechanical means whatever, simply by the hand and strength of the operator alone.

The announcement of a proposition so novel, so ultra, and contradictory to the teachings of all standard writers on surgery for the last hundred years, exposes me, I am aware, to the sneers of some, to the pity of others, and to the charge of rashness by all, and requires that I make good my statement by undoubted and substantial proof.

The subject-matter of this paper has been written, but withheld from the public and profession, several years, principally for two reasons:—

First. The theory and practice here recommended are so diametrically opposed to all our highest surgical authorities, whether among the living or the dead, that I have shrunk from the obloquy and opprobrium that are apt to attach to an innovator upon long established opinions, dogmas and practices, especially when held and taught by men in our profession of profound science, and practical skill.

Second. I had to wait some four or five years for an opportunity to put to the test this mode of reducing a luxation of the hip-joint, before a case presented itself in my own practice. In the spring of 1844, the first opportunity offered, but as 'one swallow does not make a summer,' I was still unwilling to venture before the profession, although so far as one case could establish a principle, this one did so, as we shall see directly. During the past year (1849), two other cases have fallen into my hands, and have rendered what was before certain to my own mind, 'doubly sure.'

As the facts and views here adduced call in question, and entirely controvert several important dogmas of Physiology and Surgery, taught as *truths* by the Bells, Sir A. Cooper, S. Cooper, Fergusson, Druitt, Liston, Chelius, South, Physick, Wistar, Dorsey, Mott, Warren, Gibson, and other eminent teachers of surgery, I may be pardoned if I briefly sketch the mental process, the observations and experiments by which I arrived at conclusions so diverse from the teachings and experience of such eminent surgeons.

During the years 1826, 27, and 28, while a student of medicine and surgery, it was my fortune to witness several cases of luxation of the head and fracture of the neck of the femur. We had at that time in our embryo city of Rochester, of ten thousand inhabitants, a corps of some six surgeons and physicians of as great efficiency and skill as any town of its size could boast. When so important an operation as the reduction of a hip-joint was to be performed,

several, if not all of these gentlemen, usually met, together with their students, and among them myself.

Having witnessed, on several occasions, the *inquisitorial torture* inflicted upon the unfortunate patients—their screeching—their piteous begging to be released—the slipping of bandages—the yielding and re-adjusting of fixtures—the delay—the duration of the operation, sometimes two or three hours—the exhaustion of the patient, and after all, in some instances, a failure, and the patient a cripple for life, a profound horror and prejudice against the use of pulleys seized me (Jarvis's Adjuster had not then been invented), and I could not avoid the conviction that a great power was unnecessary, and that it must be misapplied. Preceptors, professors and authors were interrogated—the unanimous reply to all my queries was—‘to overcome the contraction of the great muscles, which drew up and shortened the limb, viz., the glutei, triceps femoris, the iliacus internus and psoas magnus.’ But do not these same powerful muscles contract and shorten the limb when there is fracture in the neck of the femur? Yes. And you tell me that one of the diagnostic symptoms between fracture and dislocation on the dorsum, is, that in fracture the limb can be easily extended to its normal length, by the strength of one man, while in luxation it cannot. Now why do these great muscles require so much more force to overcome them in one case than in the other? To this, I could get no satisfactory or even plausible reply.”

* * * * *

Dr. Reid now performed several experiments upon the muscles of sheep, by suspending weights, by way, if possible, to ascertain their capacity to elongate beyond the normal length, etc. He then resumes—

“I now recommenced my manipulations and evolutions on the skeleton, to ascertain how this indirect, and not merely useless, but absolutely detrimental action of the pelvis could be avoided. It was soon obvious that these muscles, instead of being extended further, could all be *relaxed*, and their natural *action* and *contraction* be made to draw the head of the bone back into its socket, and that instead of employing all *our power to overcome them*, we could actually use all *their power to aid us* and do the very work for which we were in vain employing the compound pulley, at an immense disadvantage. And all this is done by simply carrying the injured femur in the only direction in which, in fact, it can be moved, viz., inwards and over the sound one, and upwards and over the abdomen, flexing it upon the pelvis, till the knee is carried up as high as the *umbilicus*, and outwards on a line with the same or injured side—then turning the toes outwards—the heel inwards—the foot across the opposite and sound limb, and carrying the knee outwards and downwards, and making gentle rotations of the thigh—when the head slips in easily, with a slight jerk, and an audible snap—and the whole limb slid down easily and gently into its natural position beside the other. The whole operation can be performed more easily, and in less time, than it can be described.

The conviction was so strong in my mind that this method was certain and practicable, that I no more doubted it then than I do now, after having demonstrated it in three several instances, two of which were within the last year. And so impatient was I to put my theory to the test, that I believe I almost wished every day (wickedly perhaps) that some one would dislocate his hip, and give me an opportunity to reduce it.

I was aware that Professor Nathan Smith, of New Haven, had, in his day, taught in his lectures a somewhat similar method—perhaps the same; but none of his pupils whom I had ever met could describe either his method

or the rationale of it. I had seen, too, his memoirs, published by his son, Professor N. R. Smith, of Baltimore, but he confesses that he did not recollect the teachings of his own father, and that he, the elder Smith, had left no notes or records of his doctrines or practice. Dr. N. R. Smith, however, proceeds to give what seems to him the probable doctrines inculcated by his father, and gives directions for reducing dislocations of the hip, with drawings illustrative of his method. But it is apparent that, when he wrote his book and gave these directions and illustrations, he had never reduced a hip by his method. For his directions require impossibilities, and his illustrations are mere fancy; no such thing in nature can exist. For to *abduct* a thigh dislocated on the *dorsum* of the *ilium*, before flexing it on the pelvis, or to *abduct* and *flex* at the same time, as he directs, is absolutely impossible, without rupturing the obturator externus—and to rupture this, in order to obtain flexure, would require the power of many men; *but to flex the leg first on the thigh—then adduct the thigh, carrying it even over the sound one, and at the same time flex the thigh on the pelvis, carrying the knee over and upwards by a kind of semicircular sweep*, is a very different and a very easy thing.

CASE I. I give this case from recollection, the notes which I made of it having been mislaid. In the spring of 1844 I was called to see a strong, robust Irish woman, of whom they gave me the following history: Four days previously, while out at washing, about three-quarters of a mile from her own residence, she slipped and fell down a flight of steps; she could not rise, and when helped up could not stand. She made a great outcry, but as no blood was visible she was thought to make a great 'fuss for nothing.' Her husband, who was an intemperate carman, was sent for. He put her on his cart, and drove her home three-quarters of a mile; when he arrived there, not being able to lift her, he dumped her down at the gate as he would a load of dirt. The neighboring women helped him to carry her in, and place her in bed. For four days they assiduously fomented her hip, of which she complained greatly; but it swelled considerably, and became 'black and blue.' They now began to think the woman was '*hurt*ed.' In this condition I found her. A single glance at the position of the knee and toe created a strong suspicion of dislocation, but an attempt to *abduct* and *rotate* the limb gave great pain, and determined the nature of the accident. Although the patient was suffering considerably, I was in ecstasies, and felt really obliged to her, not so much, I hope, for dislocating her hip, as for the opportunity she afforded me to reduce it. I called in Drs. M. Strong and the elder Bradley, and Mr., now Dr. Hammond, to assist me. I stated to them my determination to reduce it, if possible, without the use of pulleys, and explained my method. Nevertheless, I had provided myself with compound pulleys, to be used in case of a failure. As the accident was of four days' standing, the hip considerably swollen and inflamed, and the patient quite muscular, I took the precaution to bleed her freely, and give her tart. antimony till nausea was produced. She was in the mean time placed on a lounge, on which a wide board was laid, and covered with a folded quilt. This made a firm table about fourteen inches high, and about twenty inches wide, which gave me the opportunity of throwing the whole weight of my body on the flexed limb, if I wished, while it gave me perfect command and control over it in every way. The patient was placed on her back, and a sheet folded lengthwise thrown across the upper edges of the pelvic bones, and each end given to an assistant, for the purpose of fixing the pelvis. Placing myself on the right and injured side, I seized the knee with my left hand and the ankle with my right; I then flexed the leg upon the thigh; at the same time,

slowly carried the knee and dislocated femur over the sound one, pressing it firmly down upon it, and upwards over the pelvis, constantly pressing it close to the body, moving it upwards with a circular sweep over the abdomen till the thigh was in a line with the right side of the body, and knee pointing towards the right axilla. While the thigh was being carried up to this position, the body or axis of the femur was performing a kind of rotation on itself, whereby the toe was coming more outwards and the heel more inwards. In other words, as the knee went upwards, the *obturator externus*, *quadratus*, etc., drew the head of the bone downwards and inwards towards its socket. When the knee and thigh were in the position above indicated, the heel was strongly rotated inwards, the knee drawn outwards, and the foot carried across the thigh of the sound side, when the head slipped into its place, and the limb glided gently down into its natural position. In doing all this, comparatively very little force was employed, and very little pain produced, for the obvious reason, that by this evolution the muscles that were in a state of extreme tension and irritation by the displaced bone, were gradually relieved and relaxed, as the head of the bone descended and approximated its proper place, which it did by the action of the same extended muscles.

It will be perceived that by this mode of operating we make a *lever* of the shaft or body of the femur, and a fulcrum of the edge of the pelvis, and by this means lift or dislodge the head of the bone, while the abductor muscles draw it downwards and inwards, making it, as it were, *back into* its place, through the rent of the capsular ligament. Whereas, if it were drawn by direct force as by the pulley, the head and neck of the bone would act as a kind of hook, and would tear away the capsular ligament, if it were only slit, and as I believe it often, if not always, does tear off the tendon of the *pyriformis*, as I shall endeavor to show presently; for the *abductor* muscles are so strained, and hold the head of the bone so firmly to the dorsum, behind the ridge of the *acetabulum*, that it is next to impossible for it to mount over this ridge and into the socket, and must therefore descend behind it, tearing everything before it—ligaments, muscles and all—and hence the immense power required to reduce it by these means, and hence, too, the failures, the fractures of the neck, and the cripples that have been made for life by this barbarous and unscientific mode of reduction.

CASE II. On the 31st of July, 1849, Mrs. Cornelius Christie, aged about 38 years, was thrown from the top of a load of household furniture, with a small child in her arms. Motherlike, she held fast to the child, which received no harm; but, falling among and upon the furniture, she had the perineum and vulva considerably lacerated, and her right hip dislocated. I saw her within one hour after the accident. Doctors Bowen, Brown, and Holton were in attendance when I arrived, in company with Dr. E. P. Langworthy. The patient was placed at once in the position as already described in case No. 1, when I proceeded, in like manner, to operate; but the wound in the perineum and vulva occasioning great pain, on the attempt to flex the thigh, I desisted, and gave a full dose of morphine, not having any chloroform on hand. We waited three-fourths of an hour for the effect of the morphine. I then, as already described, seized the knee with one hand, and the ankle with the other—flexed the leg on the thigh—the thigh on the pelvis, carrying it *inwards and over the sound limb*—then upwards over the abdomen, till the thigh was nearly parallel with the right side—then rotated the heel inwards, carried the foot over the sound thigh, and the knee outwards, when, by a gentle oscillation and rotation of the thigh, the head slipped into the socket. The whole time required in this operation did not exceed

two minutes. The force employed, and the pain suffered, were too trifling to be named.

CASE III. On the 2d of Dec., 1849, early in the morning, I met Dr. E. M. Moore, Prof. of Surgery in the Woodstock and Berkshire schools of medicine. He informed me he had been called up in the night to attend a case of dislocated hip. I jestingly said, "I wish you would let me show you how to reduce it." He replied as jocosely, "I understand you have got some new-fangled notions about dislocations, and I should like to see you try your skill." He desired me to explain my method. I did so, illustrating it by manipulations on the skeleton in his office. He agreed that I should make the attempt; but, that the full merit of my mode of operating should be brought out, he proposed that I should have no aid from any of the usual adjuvants, such as the warm bath, nauseating doses of antimony, bleeding, opium, or chloroform. To all this I consented.

The patient, William Fagan, was a strong muscular Irishman, 52 years of age. He was placed on a lounge, on a board covered with a folded blanket, as already described; two assistants, one on each side, steadied the pelvis. I proceeded in all respects as above stated in the two preceding cases, and in about *two or three minutes* reduced the dislocation. Drs. Moore and Crutenden, Mr. D. Bly, and other students of Dr. M. were present.

* * * * *

From the foregoing facts and observations, gentlemen, I deduce the following propositions:

1. The chief impediment in the reduction of dislocations, is the indirect action of the muscles that are put upon the *stretch* by the mal-position of the dislocated bone, and not by the *contraction* of the muscles that are shortened.

2. That muscles are capable of so little extension, beyond their normal length, without hazard of rupture, that no attempt should be made to stretch them further, in order to reduce a dislocation, if it can possibly be avoided.

3. The general rule for reducing all luxations should be, that the limb or bone should be carried, moved, flexed or drawn, in that direction which will relax the distended muscles.

4. Dislocation of the hip on the *dorsum ilii*, an accident so serious to the patient, and so formidable to all surgeons, is reduced with the greatest ease, in a few minutes, without much pain, without an assistant, without pulleys, without 'Jarvis's Adjuster,' or any other mechanical means, simply by flexing the leg upon the thigh, carrying the thigh over the sound one, upward over the pelvis, as high as the umbilicus, and then by *abducting* and rotating it."

CASE IV. *Reduction of dislocation of the right femur on the dorsum ilii, by manipulation.* By Thomas M. Markoe, M. D., one of the attending surgeons of the New York Hospital. New York Journal of Medicine, 1855.

The first opportunity which presented itself for the trial of the new method, was in the case of an Irish laborer, who was brought into the New York Hospital, November 30, 1852, with a luxation of the right thigh. He had been struck, a short time before admission, by the cowcatcher of a passing railway train, and thrown some distance, and in his fall, probably, the accident was produced. The symptoms were those of the dislocation on the *dorsum ilii*, the head lying rather lower down and nearer the ischiatic notch than usual. The thigh was shortened about two inches, tended across the other, with the ball of the great toe of the injured limb touching the instep of the other foot, fixed in its position, and the head of the femur was felt in the position above

described when the thigh was rotated on its axis. In addition to this injury, he had received a compound fracture of the left leg, three inches above the ankle, together with a good deal of bruising of other parts of his body. The patient was etherized to the extent of complete relaxation, and Jarvis's Adjuster was applied. It broke on the first trial of extension, and was laid aside. This mischance suggested the trial of Dr. Reid's plan, which was accordingly adopted. The operator, Dr. Buck, after bending the leg upon the thigh, gradually adducted the thigh, while at the same time it was being flexed upon the trunk. Carrying the limb thus bent at the knee, and strongly adducted, over the sound thigh, by a gradual sweep over the abdomen, and then slowly and steadily abducting the limb so as to carry the knee outwards, making at the same time a rocking motion by moving the leg backwards and forwards, had the effect of dislodging the head of the femur from its new position, and making it approach the acetabulum; but it did not enter the socket. From the position above indicated, the limb was now brought down slowly towards a straight position, still kept in a state of forced adduction. This last manoeuvre seemed to have a very powerful influence in forcing the head towards the acetabulum, but the whole proceeding was completed without success. It was observed, however, that the head had been moved a little higher on the dorsum than it was before. The same manipulation was now again practised more deliberately and more carefully than before, and as the limb was being brought down abducted, we had the satisfaction of seeing and hearing the reduction effected by the head of the bone slipping into its socket. All deformity had disappeared, and the motions were free in all directions. The other injuries were properly attended to, and the recovery from the effects of the luxation was rapid and satisfactory. He finally recovered from his compound fracture also, and left the hospital with a good leg and a perfect hip.

CASE V. *Dislocation of the left femur into the perineum; reduction under chloroform.* By Charles A. Pope, M. D., Prof. of Surgery in the St. Louis Med. College. St. Louis Med. and Surg. Journal, 1850.

James B., an Irishman, aged forty, on entering the St. Louis Hospital, gave the following account of his accident, which had occurred six hours previously: He was engaged in excavating earth, and having undermined a considerable bank, it unexpectedly fell upon his back, catching him in a bent position, with his legs stretched widely asunder. The weight crushed him to the earth, simultaneously fracturing both bones of his right leg, the lower extremity of the radius of the same side, and also dislocating the left hip.

On examination the fractures were readily recognized, and my attention was at once directed to the peculiar position of the left thigh. This was thrown quite at a right angle to the body, and somewhat forwards. The normal site of the great trochanter offered a cavity in which the fist could be easily placed, while the head of the bone was both seen and felt below the skin, and raising the raphé of the perineum. On rotation, which was difficult and caused intense suffering, the movements of the *caput femoris* were distinctly visible. There was experienced by the patient an inability to void the urine, which was doubtless produced by the pressure of the head of the bone upon the urethra, and the difficulty continuing after reduction, relief was only afforded by the use of the catheter. This trouble soon subsided.

The fractures having been attended to, and the patient put under the full effect of chloroform, two loops were applied interlocking with each other in the groin, and using the leg as a lever, extension by means of the pulleys was made transversely to the axis of the body. A steady force was kept up for a

short time, and the head of the thigh-bone glided into its socket with a snap that was heard by every attendant and patient in the large ward, where, for the convenience of the *pillars*, the operation was performed. The patient, on recovering from the influence of the anæsthetic, seemed much delighted, and said that he had felt no pain whatever.

Besides the four ordinary luxations at the hip-joint, viz., on the dorsum ili, into the sciatic notch, on the os pubis, and into the foramen ovale, authors usually speak of certain anomalous dislocations occurring in this region. Thus the head of the femur has been displaced so as to rest, first, on the anterior superior spinous process of the ilium; second, on the anterior inferior spinous process of the ilium, or in the space between the two; and third, on the tuberosity of the ischium, or on the spinous process of that bone. These are, so far as I know, all the varieties of dislocations of the hip met with in books, that into the perineum not being mentioned. The only similar case that I remember ever to have heard of, was one related to me many years ago by my friend, Professor Parker, of New York. It occurred in a man who was busied in calking the seams of a flat-boat, which was turned upside down. His body was bent, as he was compelled to calk overhead, and his thighs were strained apart. The supports of the boat accidentally giving way, it fell, and the gunwale of one side came down upon the upper part of his thigh, driving the patient into the soft mud below, his body being under, and his leg external to, the boat. When extricated, the thigh presented the same rectangular position, noticed in the case above. Dr. Parker, whose ability in diagnosis we have no reason to doubt, affirmed the case to be one of luxation in perineo.

It might be supposed that there may have been in these instances some error, and that the displacement of the head was merely into the foramen ovale, and not into the perineum. I feel confident, however, that both were really dislocations as reported. The various medical gentlemen who examined the case with me, all coincided in my opinion. The direction of the displacing force in these two varieties of luxation is precisely the same, and but little greater violence would be required to throw the head on, past the foramen ovale, and branches of the ischium and os pubis, into the perineum. In the cases cited, there was the same position of the body, and of the outstretched legs, and the attendant causes and circumstances were just such as would most likely favor the production of such an accident. Had the head of the femur in the case of James B. been situated in the foramen ovale, it could not have been so plainly seen and felt, covered as it would have been by the thickness of interposed muscular attachments. Besides, the exaggerated position of the thigh, and the direct pressure of the head of the bone on the urethra, causing retention of urine, are to my mind conclusive evidence of the nature of the case; for, although in the latter instance some irritation might be propagated from the head, displaced in the foramen ovale, yet it would scarcely be so great as to cause retention of urine to the extent observed in the case above related.

CASE VI. Dislocation of the left femur into the perineum; reduction. By W. Parker, M. D., Prof. of Surgery in the College of Phys. and Surg., New York. *New York Journal of Medicine*, 1852.

The patient, Mr. E—, aged about thirty-five, was a calker by occupation, and the accident happened while he was at work under the bottom of a canal boat, July 20th, 1831. The boat was raised upon props three and a half feet long. He was standing, bent forwards very much, and his feet far astride. Between his feet there was lying a piece of round timber, a foot in

diameter. While at work in this position, the props gave way, the boat came down, killing one of the workmen, and forcing the patient down by the side of the timber over which he was standing, in such a manner that the left thigh was placed between it and the bottom of the boat; on being extricated from this situation, the left limb was found standing at a right angle with the trunk, the toes were turned a little inwards, the natural form of the nates was lost, and the head of the bone distinctly felt in rotations in the perineum, behind the scrotum, and near the bulb of the urethra.

Reduction was effected, without much difficulty, in the following manner: The patient was placed upon a table, resting upon his back, and the pelvis confined by passing a strip of muslin around it. Extension was then made downwards and outwards, accompanied by moderate rotation, and in this way the head of the bone was made to surmount the ramus of the ischium, and to pass into the foramen thyroideum, changing the luxation from a perineal to a thyroideal one. From this position the bone was replaced in the acetabulum, by carrying the luxated limb strongly across the sound one. The patient soon recovered the use of the joint.

CASE VII. *Simultaneous dislocation of both thighs into the thyroid foramina; reduction.* Preussische Medicin. Zeitung—Medical Examiner, vol. i., 1838.

A sailor was sitting astride a plank, when a wave suddenly forced him up against a cross beam, which struck his back violently, while the plank was still between his legs. The poor fellow was lying on his back, when Dr. Sinogowitz was summoned to his assistance. Both limbs were quite motionless, and evidently much deformed from their natural figure. The thighs were separated, the one from the other, and could not be approximated; the trochanters were much lower and less prominent than usual, and the muscles of the hips over them were in a state of extreme tension. The body was bent immovably forwards and downwards upon the thighs; the knees were moderately flexed, and the toes were not turned either inwards or outwards. The diagnosis, therefore, was that the heads of both of the thigh-bones were dislocated downwards and inwards. The reduction was effected in the following manner: The pelvis being secured by two assistants, the surgeon took his place between the limbs of the patient, and having put a towel round the right thigh above the knee, he passed the noose of it over his own neck. Extension was then made by means of a towel made fast above the ankle, and inclined a little to the left side, and while this was steadily continued, Dr. S. lifted the head of the bone, and directed it upwards and somewhat outwards, by raising and stretching out his head with all his power. It slipped into the socket without any noise. The left limb was then reduced in nearly a similar manner. The mobility of the limbs was almost immediately restored, at least in the horizontal position; but several months elapsed before the patient could walk with any degree of ease. The tediousness of the recovery was owing in a very great measure to the severe injury of the lumbar vertebræ, which he sustained at the time of the accident. For three weeks the sphincters of the bladder and rectum were quite paralyzed.

CASE VIII. *Dislocation of the right patella; revolution on its axis; reduction.* By Wm. T. Wragg, M. D., of Charleston, S. C. Charleston Med. Journal and Review, 1856.

On the 29th of June, 1855, a black man was engaged in loading lumber upon a boat. It was conveyed by means of a car running on rails. He carelessly allowed himself to be caught by the loaded car, while it was in motion, and

jammed against the cross sticks on which the piles of lumber rested. The accident occurred about 5 o'clock P. M., and I saw him in half an hour. He was lying on his back, and his right leg was stretched stiffly out. The knee was entirely changed in form. A sharp and prominent edge was apparent on the outer part of the joint, projecting about half an inch forward of the normal plane of the anterior surface of the patella, and about the same distance over the outer edge of the joint. Beneath this edge there was a depression into which the ends of the fingers could be readily passed, and at the bottom of which the outer edge of the articulating surface of the outer condyle of the femur could be felt. The inner part of the joint was flattened and depressed, and the fingers could readily detect the inner edge of the inner condyle of the femur over which no portion of the patella rested. Passing the fingers from this point outwards, and pressing well upon the surface of the bone, a depressed edge was plainly felt, about half an inch or less from the rough elevation which borders the articulating surface of the inner condyle of the femur, on its inner edge. Above and below the patella, an evident twist was discovered in the tendinous insertion of the extensor muscles, and in the ligament of the patella. The joint was stiff, and allowed but limited motion.

From these appearances, I recognized a dislocation of the patella, by which the bone was twisted completely round on its longitudinal axis, so that its outer edge corresponded nearly to the inner edge of the articulating surface of the femur: its anterior face was turned backwards, and rested on the same articulating surface; its inner edge looked outwards and a little forwards, forming the projecting edge in front and on the outside of the joint; and its posterior or articulating surface was under the skin, looking forwards with a slight inclination inwards.

* * * * *

The reduction was effected without difficulty. The thumbs of both hands being placed on the outer and inner edges of the projecting border of the patella, while the index and middle fingers were pressed against the other border in a direction outwards and backwards, force was applied with a view to roll the bone over into its place. The first efforts failing, a bystander was directed to pass his hands under the knee-joint, and make forcible and intermittent flexion of the leg. In a moment the bone performed its evolution, slipped into its place, and the man rose up and walked. He experienced no further inconvenience, the ligaments, cartilages, and investing membranes of the joint having received no injury whatever from this extensive displacement.

CASE IX. Complete dislocation at the right knee-joint; reduction. By E. K. Sanborn, M. D., of Lowell, Massachusetts. Boston Medical and Surgical Journal, 1856.

W. S., a strong, healthy man, of middle age, employed in one of the factories in this city, was caught by a belt and carried over a shaft which was revolving with great rapidity. The shaft was very near the ceiling, and every time the man made the revolution (and he made a great many before the machinery could be stopped) his limbs came with great force against portions of the building. When taken down, his right leg and thigh had the appearance of being broken, and with that impression his friends carried him to the hospital, where he came under my care.

At the first glance, the injured limb appeared to be broken in many places. It was shorter than the other by six inches, and laid on the bed a shapeless mass. A more minute examination proved the nature of the injury to be a complete dislocation of the tibia forwards. The head of this bone was quite prominent on the anterior aspect of the lower third of the femur, while the

condyles of the femur were driven down under the belly of the gastrocnemius muscle. The extensor muscles of the thigh were of course wholly relaxed, and the patella could be moved about at will. The skin was unbroken, and not even discolored in the region of the knee. The reduction of the dislocation was very easily accomplished. The pelvis being held by an assistant, I grasped the ankle, and, with a moderate effort, drew the bone down into its proper situation. The symmetry of the limb was immediately restored, and apparently no serious damage had been done.

The limb was then placed in a semi-flexed position, and close watch was kept for the first appearance of inflammation. There was a trifling degree of swelling, but no pain, nor complaint respecting the knee. The patient was detained in the hospital for a short time, on account of sloughing about the ankle, which followed the bruises received at the time of the accident, and was then discharged entirely well.

CASE X. Dislocation of the right metatarsal bones under the tarsus; reduction not effected. By Mr. Tuffnell, Surgeon, Dublin City Hospital. Dublin Quarterly Journal of Med., 1854.

Instances of luxation of the metatarsus upon the tarsus are very rare, only six having as yet been recorded, but luxation of the metatarsus under the tarsus is still rarer, and the subjoined case is the only one on record.

With regard to the diagnostic signs, it will be seen that the foot is shortened three-fourths of an inch or more, curved inwards, and at the base of the great toe broader than its fellow by an inch; that the instep stands out sharply defined, with a sudden angular prominence and marked deficiency in front; that the arch of the foot on its inner border is preserved, but the centre of the sole is occupied by the tarsal extremities of the displaced metatarsal bones. Mr. Tuffnell's account of the case is as follows:—

“For the opportunity of witnessing it I am indebted to Mr. Dolmage, surgeon of the 7th Dragoon Guards, in whose regiment the accident occurred, and in the following manner: A trooper was returning off duty to Portobello Barracks, Dublin, on the 30th of November, 1851, and was walking his horse cautiously, the road being very slippery from frost. Whilst turning a corner, bordering upon the canal, the animal suddenly slipped, and fell with his whole weight upon the soldier's right leg and foot, crushing them against the ground. The horse rose instantly, the man remaining in the saddle, but suffering such agony, that, unconscious of what he was doing, he reined the animal back into the canal. Here a violent struggle ensued, the horse eventually disengaging himself from his rider, who, assistance being at hand, was dragged out, and taken to his regimental hospital close by. He was seen by Mr. Dolmage in a very few minutes after the accident had occurred, and before any considerable degree of swelling had taken place.

The foot was found to be much shortened, curved inwards and bent, the tarsus presenting a hard bony projection, overhanging the metatarsus, whilst deep under the plantar structures a second bony mass could be felt lying obliquely across the sole of the foot.

Reduction was at once attempted by placing the patient on his back, fixing the pelvis, flexing the leg upon the thigh, and extension then made by pulleys attached to the extremity of the foot and to the toes, and persevered in for a considerable time, during which every possible movement of the metatarsus upon the tarsus, calculated to assist reduction, was resorted to, and leverage also made upon the dislocated extremity of the metatarsal bone of the great toe, projecting in the sole, by means of a ruler being applied to it, and drawn upwards and forwards, whilst the clasped hands of a powerful assistant,

placed upon the instep, held that part downwards and backwards. As great a degree of force as it was considered justifiable to employ was expended in the effort at reduction, and continued for one hour, but not the slightest alteration in the position of the bones could be effected. Considerable effusion and ecchymosis followed, the latter extending almost up to the knee. Leeches, fomentations, etc., were prescribed, and the ordinary treatment for violent contusions had recourse to. Under this treatment swelling subsided."

"All swelling and thickening had now disappeared, the outline of the tendons and every portion of the extremity being most accurately defined. In its general aspect, the foot somewhat resembled a case of *pes equinus*, being considerably shortened and arched upon its inner border, the distal extremity of the metatarsal bone and first phalanx of the great toe being adducted, the last phalanx at the same time pointing somewhat outwards. The instep presented a normal condition from the malleoli to the extremity of the internal cuneiform bone, which projected in a sharp point, raising the integument, which was stretched over it, white and glistening like a tightly bent knuckle; from the outer border of the cuneiform bone ran an evident ridge, marking the division between the tarsus and metatarsus, and defining the line for Hey's amputation of the foot.

The measurements of the injured member, as compared with those of the opposite foot, were the following: Length of the dislocated foot from the point of the great toe to the heel, $9\frac{1}{2}$ inches; of the uninjured foot, $10\frac{1}{4}$ inches. Breadth of the dislocated foot across its widest part at the base of the great toe, $4\frac{1}{4}$ inches; of the uninjured foot, $3\frac{1}{2}$ inches. The extensor tendons of the injured foot stood out in strong relief, raising the toes; the tendons of the sound foot could be but indistinctly seen.

These were the principal appearances which presented themselves. The patient at this time had made no effort to walk, for upon the few occasions on which he had tried to use the limb, supported by crutches, he found a total inability to move otherwise than on the heel, in consequence of pain of a burning and lancinating character, being produced in the sole of the foot, whenever he attempted to throw any weight upon the toes, and to place the plantar structures on the stretch."

"Six months afterwards I obtained a second cast of the foot, and again carefully inspected the limb. It had now become more inverted, and the projection in the sole was less evident, having been rounded and partly removed by absorption. The patient walked freely with a stick, bearing his weight on the outer border of the foot, as in a case of *talipes varus*, but he could not make any effort at progression, or even move, when the foot was placed flat upon the ground, from the same burning pain before referred to, and which he described as resembling the feeling that might be imagined to result from attempting to walk in a very tight boot with a marble under the sole of the foot."

CASE XI. *Dislocation of the first three left metatarsal bones upon the tarsus.* By D. W. Hershey, M. D., of Williamsville, New York. Boston Med. and Surg. Journal, 1856.

C. F., the patient, a robust and vigorous young man, æt. 25, while riding on horseback, was suddenly dismounted by the stumbling and falling of the animal, whose whole weight fell upon his left foot.

It presented, upon the examination of Dr. L. J. Ham, of this place, the following appearances: The length of the foot was shortened about one inch. There was a prominent elevation upon the dorsum, indicating the *tarsal extremities of the first, second, and third metatarsal bones, riding over the cunei-*

form bones. I saw the case several times in connection with Dr. H., and fully concur in the correctness of the diagnosis.

The strong ligamentous union of this articulation, its slight mobility, and the compactness of the bones implicated, show the impossibility of dislocation from all ordinary applications of force.

Cruveilhier, in describing the mechanism of this articulation, says that "no example of the luxation of these bones upon the tarsus has been recorded." Consulting several surgical authorities, I do not find this species of dislocation described.

In the present case I have been only able to account for its occurrence on the supposition that the force was communicated in such a manner as to double the phalanges and metatarsal bones upon the plantar surface, dislocating upwards the tarsal extremities of the latter.

The reduction was accomplished in the following manner: An assistant taking hold of the heel, made powerful counter-extension, while the surgeon, with both hands grasping the foot, made extension, and having brought the dislocated extremities in opposition, they were reduced by strong compression with the thumb.

There being not much tendency to displacement, in order to prevent the active inflammation which must supervene upon so extensive a laceration of the ligaments, light dressings and evaporating lotions were employed.

A high grade of inflammation followed, and at one time the lividity of the surface gave strong indications of an approach to gangrene; this, however, did not occur, and with the subsidence of the inflammation the foot has progressed slowly, but favorably, to recovery.

Some time must necessarily elapse before the normal elasticity and strength are acquired, owing to the extensive infiltration, and the slowness of the reparative process in these dense fibrinous tissues.

CASE XII. Reduction of a humerus dislocated for ten and a half months. By the late Prof. Nathan Smith, M. D., of Yale Med. College, Connecticut. Philadelphia Journal of Medicine, 1827.

This was the case of a lady in Derby, Connecticut. The humeri had both been dislocated into the axillæ by a puerperal convulsion. One was reduced by Dr. Smith, at the end of seven months and a half after the accident; but it was thought not prudent to attempt the reduction of the other shoulder at that time, and another occasion did not present till the above time had elapsed. The reduction was then accomplished without the use of violent force, or any mechanical apparatus. Gentle and long-continued extension was made upon the member; the knee of the surgeon was then placed beneath the axilla, and the bone being employed as a lever, the head was, without much difficulty, conveyed upwards into the glenoid cavity.

CASE XIII Reduction of a dislocated (right) humerus by dividing the pectoralis major, latissimus dorsi, teres major and minor muscles. By Prof. Dieffenbach. Medicinische Zeitung—Lancet, 1840, vol. xxxviii.

Herr T—, a large land owner, upwards of thirty years old, had his right shoulder dislocated two years ago by a fall from his horse; the nature of the accident was not at first recognized, and afterwards, though all the usual means were adopted by several surgeons, the bone could not be returned to its place. The patient, therefore, came to Berlin; he was of a gaunt, powerful form, with a pale complexion and but little fat, and his muscles were strong and prominent under the skin. The injured right shoulder was an inch higher than the left; the acromion formed a sharp angle; on the outer side the

shoulder was deeply hollowed, and the scapula lay flat. The right arm was thinner than the left, and stood out far from the body. The head of the humerus lay on the anterior aspect of the chest, close to the clavicle, and two inches from the upper portion of the sternum. The patient had a constant sensation of coldness in the limb, and the creeping which he had formerly felt had ceased. The pulse in the right radial artery was rather weaker than that in the left. The limb was useless, and only the hand could perform some slight actions.

By moving the arm in different directions, severe pain was produced in the part where the head lay, surrounded by a thick wall of dense ligament, into which it had worked itself. In drawing the arm outwards from the body, the pectoralis major, latissimus dorsi, teres major, and teres minor became tense, with extreme pain. The last three of these muscles felt hard and tense, even when the arm was not drawn outwards. An attempt to reduce such a dislocation, without dividing these muscles and the new joint, would have been extremely dangerous, and had been found impossible; but (says the Professor), I anticipated success from the subcutaneous division of everything that resisted me.

The patient being placed on a table, with one folded sheet passed under the right axilla, and held by six assistants, another fastened round the right hand and held by six more, and a third round the upper part of the humerus held by three more (in the manner usually adopted by me in old luxations), the two first sets of assistants were ordered to pull against each other. I next bade them make a slowly-increased extension, and then stop; I then passed a small scythe-shaped knife through the skin, and divided the most tense portion of the pectoralis major, close to its tendon, which yielded with a cracking sound. I then again introduced the knife at the posterior border of the axilla, and divided, one after the other, the latissimus dorsi, the teres major, and the teres minor. All these muscles gave way with a cracking noise, which was increased by the resonance of the chest. I next passed my knife into three places by the head of the humerus, and divided in a similar manner, under the skin, the dense and hard false ligaments which surrounded the new joint, and, lessening the extension, I loosened the head by a few rotations.

A powerful extension was now again commenced on both sides, and the three assistants behind the patient pulled suddenly, while I conducted the humerus towards the joint, into which it slipped on a sudden, without again springing out. One shoulder looked now just like the other. The thorax, the shoulder, and the arm were enveloped with bandages which were soaked with paste, and after a few hours they all became dry and hard, and prevented any motion of the right side.

The bleeding from the wounds, which were not larger than those made in phlebotomy, was at most a few drops. No unpleasant symptoms ensued, and the patient suffered even less than the majority of persons in whom I have reduced old dislocations. On the ninth day I took off the bandage; both shoulders had exactly the same level and form, and there was neither swelling nor pain. The punctures in the axilla had completely healed, and scarcely a trace of them could be found; there was no collection of blood or pus. The arm was already capable of motion, and its actions were far less hindered than they are sometimes after the reduction of a recent dislocation; because in them there is often for a long time a sensitive contraction of the unnaturally stretched muscles, while in this case the division of the resisting muscles and of the newly-formed joint not only rendered the reduction possible, but at the same time diminished its after consequences. The limb is now again restored to perfect utility.

Serious injuries following attempts at reduction of luxations. Lancet, 1828, vol. xv.

In the *Répertoire d'Anatomie et Physiologie*, M. Faubert, surgeon to the Hôtel Dieu at Rouen, gives some very interesting cases of dislocation.

In one of them the attempts to reduce the dislocated joint produced a rupture of the axillary artery, gangrene, and subsequently, the death of the patient.

In another hemiplegia ensued, most likely in consequence of extravasation in the brain, from the efforts used in reduction; the paralysis gradually diminished, but the lower extremity never recovered its natural heat and sensibility, and the use of the arm was almost completely lost.

In a third case the dislocated shoulder was reduced thirty-eight days after the accident; immediately after the operation, emphysema supervened over the arm and a great part of the back; very soon afterwards violent headache and hemiplegia ensued, and proved fatal on the twelfth day. On *examination*, the brachial plexus was found extensively lacerated; at the sixth, seventh, and eighth cervical and the first dorsal vertebræ, the spinal cord was swollen, softened, and of a reddish-brown color.

In the fourth case, the reduction was followed by an enormous painful swelling of the extremity, the arm could never be used, and the fingers only retained a very small degree of sensibility and motion.

In a case of dislocated hip, the reduction was made very soon after the accident, and the head of the femur was very distinctly heard to slip into the cotyloid cavity; the patient died, however, five days after the operation. The anterior and exterior part of the hip was found ecchymosed; the pyramidalis, gemelli, and quadratus femoris, the capsule and ligamentum teres were ruptured, and the cavity of the joint was filled with pus. In this case, the fatal termination was apparently rather the result of the dislocation, than of the reduction; the observations, however, of M. Faubert, show how cautiously the attempts at reduction ought to be made, and how necessary it is to consider whether a sufficient extending force can be used, without inflicting serious injury on the patient.

SECTION III.

EXSECTION OF BONES.

CASE I. *Osteo-sarcoma; the first removal of the clavicle in America claimed for Dr. McCrearry of Kentucky.* By James H. Johnson, M. D., of New Orleans. New Orleans Med. and Surg. Journal, 1850.

In the *American Journal of Medical Sciences* for November, 1828, a case of osteo-sarcoma of the clavicle, in which exsection of that bone was successfully performed by Dr. Mott, is reported. This Dr. Mott claims as the first operation of the kind ever attempted or performed, and he asserts, is the most difficult and dangerous known in the history of ancient or modern surgery.

The learned professor is justly entitled to the approbation of the profession, on account of his fearless use of the knife, as well as his astute diagnostic knowledge; but as wide-spread as may be his fame and reputation, I doubt not this paper may change public opinion, in reference, at least, to priority of practice. I know that the doctor is too liberal and equitable to envy, or snatch an honor from an humble individual, residing in the wilds of the great Southwest, and consequently, will kindly submit to a statement of facts.

The first operation of exsection of the clavicle, for osteo-sarcoma, was

performed on the 4th day of May, 1811, in Hartford, Kentucky, by Dr. Charles McCrearry. The appliances used for surgical and mechanical skill, at that early period of pioneer life, were not equal to modern instruments, at least for a delicate, splendid, and critical operation.

The method adopted by Dr. McCrearry, was almost similar to Professor Mott's, and would admirably serve as a guide to future surgeons, upon which they could elaborate. The object here is not to censure Dr. Mott, but to place Dr. McCrearry in his proper position before the medical world. Dr. Mott may never have heard of a similar case, yet "facts are stubborn things," and "do justice to all and fear none," is an adage which should be adopted by the profession. The capital of a physician or surgeon does not depend upon the number of pieces of coin he may have in his pocket, but, strictly, is an intellectual investment, upon which frequently no interest is paid, save the mental gratification of doing good, soothing the sorrows of the widow and the orphan, and stilling anguish—the effects of poverty, wretchedness, and, consequently, diseased action.

"I have ventured (says Professor Mott, page 64, *Travels*) to call the excision of the clavicle for osteo-sarcoma, my Waterloo Operation." Certainly a self-paid compliment. As a rejoinder, and in behalf of the memory of Dr. McCrearry, I shall call his original operation "the Thames." Dr. Mott's is an imported name; the other is identified with our country, our history, and our western skill, and which form a part of the history of American surgery; at least, when such men as McCrearry was in the field of active usefulness, during the last Anglo-Saxon war. Dr. Mott says (page 104, *Travels*), "My operation for osteo-sarcoma I claim for my country, my city, and myself;" but I claim for the Western Valley, for historic truth, and for McCrearry and the profession, that the "Thames" was the great original operation and victory—one which, before, never was known or practised. The midnight student may look in vain for a precedent, even among the archives of the Old World.

Dr. Mott, for years, has worn the "tri-cornered chapeau" of surgical fame; yet although his hat may be "*the identical one*" worn by the Napoleon of the knife in France (Larrey), it fits equally well on the pericranium, reputation, and dignity of McCrearry, whose name should be emblazoned as one among the first western surgeons.

Well knowing, from considerable experience, the fatherly anxiety which naturally attaches to all improvements or innovations in practice, I am induced, and wish to lend my aid, to restore to its pristine glory, and its proper parent, the lost, but not forgotten, offspring of the mind. It is a duty we owe to society and to the Science of Physic.

CASE II. *Excision of the clavicle for osteo-sarcoma, successfully performed.* By Valentine Mott, M. D., Emeritus Professor of Surgery in the New York University.

This operation was performed on the 17th of June, 1828, upon a young gentleman from Charleston, South Carolina, for osteo-sarcoma of the bone removed. The disease had existed four or five months, fungous granulations covered the ulcerated surface, and there were occasional profuse bleedings. The operation is described in the 3d volume of the *American Journal of Medical Sciences*, 1828.

Operation.—An incision was commenced over the articulation of the clavicle with the sternum, and carried in a semicircular direction, as close to the fungous projections as the sound integuments would admit of, until it terminated on the top of the shoulder, near the junction of the clavicle with the acromion

process of the scapula. This incision exposed the fibres of the pectoralis major, which was divided as near the tumor as possible; in accomplishing this, as well as the first incision, arteries sprung in every direction, and required ligatures. A number of large branches of veins, under this muscle, emitted blood freely, and required to be tied.

In conducting the incision through the pectoral muscle, towards the scapular extremity of the clavicle, care was taken to avoid the cephalic vein, as it passes between this and the deltoid muscle. A small portion of the latter muscle was detached from the clavicle, which readily allowed the vein to be drawn outwards towards the shoulder.

On attempting to pass the forefinger under the vein and deltoid to the lower edge of the clavicle, it was found impracticable, as the hard osseous part of the tumor extended beyond this point, and was completely in contact with the coracoid process of the scapula.

Finding it impossible, from the size of the tumor and its proximity to the coracoid process, to get under the clavicle in this direction, an incision was made from the outer edge of the external jugular vein, over the tumor, to the top of the shoulder. After dividing the skin, platysma myoides, and a portion of the trapezius muscle, a sound part of the clavicle was laid bare at a point nearer the acromion than on a line with the coracoid process; a steel director, very much curved, was now cautiously passed under the bone from above; which, from the firm bony state of the tumor at this part, had a considerable obliquity outwards. Great care was taken to keep the instrument in close contact with the under surface of the bone. The depth of the bone from the surface rendered it somewhat difficult to accomplish this safely; an eyed probe, similarly curved, conveyed along the groove of the director a chain-saw, which, when moved a little, showed that nothing intervened between it and the bone; the clavicle was then readily sawed through.

The dissection was now continued along the under surface of the tumor, below the pectoralis major; here a number of very large arteries and veins required tying. The first rib being next exposed under the sternal extremity of the clavicle, the costo-clavicular or rhomboid ligament was divided, and the joint opened from the lower part. This gave considerable mobility to the diseased mass, and encouraged us to believe that its complete removal would be practicable.

By means of a double hook and elevator, with the assistance of our strong and very broad spatulas, properly curved, we were enabled to elevate a little the sawed end of the clavicle. After loosening the parts about it, by keeping close to the tumor, we wished to discover the subclavius muscle, as it is inserted in the bone at about this situation; but it could not be seen, as it was incorporated with the diseased mass. Had this muscle been found, the separation of the tumor would have been much less difficult and tedious, as by keeping above it, the subclavian vein is of course protected. The origin of this muscle, from the cartilage of the first rib, was seen and divided, but it was almost immediately obliterated in the tumor.

Continuing the removal of the tumor at the upper and outer parts, the omohyoideus was found lying under it, which we exposed from where it passes under the mastoid muscle, to near its origin from the superior costa of the scapula. In separating the tumor from the areolar and fatty structure, between the omohyoid muscle and the subclavian vessels, a number of large arteries were divided, which bled freely, and particularly a large branch from the inferior thyroid.

The anterior part of the upper incision was now made from the sternal end of the clavicle, and carried over the tumor, until it met the other at the ex-

ternal jugular vein. After cutting through the platysma myoides, this vein was carefully separated from the surrounding parts, and two fine ligatures passed beneath it, and tied a short distance from each other; the vein was then cut between the ligatures.

The clavicular part of the sterno-cleido-mastoideus was next divided, about three inches above the clavicle in the direction of this incision. The deep-seated fascia of the neck being now exposed, the mastoid muscle and the diseased mass were very cautiously separated from it, until the anterior scalenus was exposed.

The subclavian vein, from the edge of the scalenus anticus to the coracoid process, was so firmly adherent to the tumor, as to lead me at one moment to believe that the coats of the vein were so intimately involved in the diseased structure, as to render the complete removal of the morbid part utterly impracticable. By the most cautious proceeding, however, alternately with the handle and blade of the knife, we finally succeeded in detaching the tumor, without the least injury to the vein. This part of the operation was attended with peculiar danger and difficulty. At every cut either an artery or vein would spring, and deluge the parts until secured by ligatures. Besides several large veins, the external jugular was so situated in the midst of the bony mass, as to require two more ligatures in this place, near to the subclavian, and it was again divided in the interspace. Near the sternal end of the clavicle, a large artery and vein required tying; they were considered as branches of the inferior thyroid artery and vein.

From having cut through the clavicular portion of the mastoideus muscle, obliquely upwards and outwards a little above the tumor, we were enabled, by turning this down and keeping close to the fascia profunda, to detach the tumor from over the situation of the thoracic duct and junction of the internal jugular and left subclavian veins, without the least injury to these important parts.

To reach the lower part of the tumor as it extended upon the thorax, it was necessary to separate the pectoralis major in a line with the fourth rib, and to make a transverse incision two inches in length through the integuments and muscles at about its centre. The incision upon the neck extended from the sterno-clavicular junction in a semicircular direction, to within an inch of the thyroid cartilage and base of the lower jaw, and two inches from the lobe of the ear, and terminated near the junction of the clavicle and scapula.

The fungous and bleeding character of the apex of the tumor implied that it was freely supplied with vessels. The discharge of blood was so free at every step of the operation, that about forty ligatures were applied. It was estimated that the patient lost from sixteen to twenty ounces of blood.

All the parts now presenting a healthy appearance, the ligatures were cut close to the knots, and the cavity of the wound filled with lint. Long strips of adhesive plaster were applied to prevent the edges of this extensive wound from further retracting; a light compress, a single-headed roller loosely applied around the chest and shoulders, completed the dressing.

The patient fully recovered, and is now known to us as a most estimable and useful clergyman in his native city.

CASE III. *Complete removal of the clavicle for caries; recovery.* By A. J. Wedderburn, M. D., Prof. of Anatomy in the University of Louisiana. New Orleans Medical Register, 1852.

Michael Foggerty, aged 21 years, a laborer, was admitted into the Charity Hospital on the 21st of January, 1852, with caries of the clavicle, so extensive as to require its entire removal, by disarticulation at both extremities.

The operation was made whilst the patient was under the influence of chloroform.

Operation.—An incision was made down to the clavicle over its entire length, and sufficiently far beyond its articulating points to enable the disarticulation to be effected. The soft parts attached to the upper surface and the anterior border of the bone, were separated—next the separation from the acromion effected—the dissection was then continued close to the bone beneath, whilst the parts were kept on the stretch, by elevating the bone from the point just indicated. During the dissection the bone broke, from its diseased condition, about one and a half inches from its sternal articulation, which rendered the dissection connected with this portion more tedious than it would have been, had there been a sufficient length left to have given a purchase. For the removal of such a diseased part as this, there can be no established mode of operation. Circumstances must always govern. Caution and a thorough knowledge of the region is all that is necessary to make such operations simple and easy. The result of this operation was perfectly successful; recovery was rapid, and the case was discharged cured, towards the last of April, in something less than three months after the operation. When the patient left the hospital the use of the arm was perfect; the shoulder occupied its natural position; it was neither depressed, projected forwards, nor drawn nearer the sternum, and no other evidence presented that an operation had been performed than the cicatrix. He was discharged on the 8th of April.

Treatment.—The cavity from which the bone was removed was filled with lint saturated with a solution of quinine, and kept in this condition for twenty-four hours. The next day the cut surfaces were brought together with adhesive plaster, over which was placed a compress of lint, wet with a solution of quinine, about five grains to the ounce of water. No other treatment was resorted to during the progress of cure. The shock from the operation was so slight that he was sitting up in twenty-four hours after the removal of the bone. The solution of quinine was chiefly used in this case for its prophylactic effects against erysipelas, which was prevailing in the hospital at the time.

CASE IV. *Exostosis of the clavicle and nearly its complete extirpation; recovery.* By E. M. Bartlett, M. D., of Louisiana, Missouri. St. Louis Med. and Surg. Journal, 1854.

Robt. E. Verdier, aged twenty-one years, visited Louisiana on the 18th of May, 1853, to consult me about a tumor on his left shoulder, that caused him much inconvenience and some suffering. Upon examination I found a conical-shaped tumor surmounting the left shoulder; of irregular contour; firm and unyielding to pressure; nodular on its surface, and immovably fixed in its position. It involved the outer two-thirds of the clavicle, but seemed to have no other abnormal attachment to complicate an operation and render its removal impracticable. The protuberance measured about twelve inches in circumference around its base, and had a vertical diameter of about four inches from the summit to the lowest portion felt in the subclavian region. It filled the space from the clavicle to the spine of the scapula; and extended from the acromion to a point on the clavicle, within an inch and a half of the cleido-sternal articulation.

On its acromial aspect, midway between the base and apex, was an ulcerating cavity of circular form, about an inch deep and half an inch in diameter, which discharged an ichorous and highly offensive matter. The walls of this cavity were smooth, of a hard bony texture, and insensible under the irritation of sharp-pointed instruments. Upon inquiry, I learned that the ulceration at this point was, in the first instance, produced by rudely breaking off

spiculæ of bony matter that were luxuriantly thrown out above the surface of the tumor about a year ago; and that, subsequently, it was maintained and aggravated by the ill-advised application of a nostrum, called "Jew David's Plaster." The history of this case, as given by the father of the young man, is briefly this: A small node made its appearance on the collar bone some fifteen years ago, without any assignable cause. It continued to grow gradually, but slowly; and until within the past year it has not been attended with much pain; but it has, nevertheless, been the constant cause of more or less discomfort to him, and an increasing hindrance to the free use of his arm. His general health does not seem to have been much, if at all, affected by this morbid growth. No evidence could be perceived of a persistent taint in the system perverting the nutrition of the tissues; nor did a careful examination of the thorax by auscultation and percussion disclose the existence of any organic lesion of the heart or lungs as an accidental or consecutive phenomenon.

With these data before me, as a basis for an opinion, I did not hesitate to pronounce the tumor an exostosis, and to advise its immediate excision. The patient and his father consenting thereto, the operation was undertaken, and successfully performed on the following day, and in the following manner:—

Operation.—The patient was laid upon a table, with his head elevated about six inches; and, being put under the influence of chloroform, an incision was made from the sternal articulation to the base of the tumor, and thence carried on either side towards the acromion, as high up on the body of the tumor as the apparent soundness of the integument would permit. Careful dissection was now made of the ligamentous and other attachments of the clavicle, near the sternal junction, until a sound portion of the bone was laid entirely bare. A grooved conductor, bent into proper shape, was cautiously passed under the bone from above, which directed the passage of the free end of a curved saw (made for the purpose, and fitted to a frame). After the passage of the saw beneath the clavicle, the protruding end of it being fastened to the frame, it was made by upward traction to cut the bone through at this point; leaving about an inch and a quarter of the sternal end of the clavicle *in situ*. The integument investing the body of the tumor was then reflected sufficiently to enable me to determine with more precision its boundaries and connections. By this dissection, it was found that the distal end of the clavicle was completely lost and buried in the expansion of the morbid mass; but that it did not overleap the scapulo-clavicular articulation, and involve any portion of the acromion process. The operation was continued by dividing a portion of the deltoid, severing the articular and ligamentous connections of the clavicle and acromion, and, finally, by a careful dissection of the subclavius muscle.

Strong adhesions existed between the tumor and subjacent tissues, which, however, were broken up by the cautious use of the handle of the scalpel.

The operation occupied twenty minutes, from the first incision to the removal of the tumor. Four ligatures only were required for divided arteries; and there was less loss of blood than I have often witnessed in a minor operation.

The patient was thoroughly anæsthetized, and was entirely unconscious of what had been going on until the wound was nearly dressed. When revived, he expressed himself "feeling very well;" and seemed but slightly affected with vertigo and the obscuration of mind that frequently follows the use of chloroform. He recovered rapidly and without one unpleasant symptom; and was discharged cured on the 20th day of June, with the wound perfectly cicatrized.

CASE V. *Removal of the entire clavicle, for caries and exostosis; recovery.*

By Geo. C. Blackman, M. D., Prof. of Surgery in the Med. College of Ohio. *Western Lancet*, 1856.

On the first of the present month (May), in consultation with his family physician, Dr. Wm. Wood, I saw Mr. J. B., æt. 42, who had suffered from caries of the clavicle for more than a year. The first fistulous opening formed near the junction of the outer with the middle third of the bone, and just within this point it seemed excavated and expanded to a considerable extent. From its inferior margin there was a sharp and ragged bony projection, which proved to be a true exostosis. About an inch external to the sterno-clavicular articulation, there was a second fistulous opening, through which a considerable quantity of matter was daily discharged. The adjacent integuments were of an unhealthy aspect, presenting every indication of extensive disease at the articulation.

Assisted by Drs. Wood and Gray, and my pupil, Mr. Jones, I proceeded at once to the removal of the bone. The patient having been brought under the influence of a mixture of chloroform and ether, I commenced my incision at about the middle of the sternum, and carried it to the external fistulous opening. Great care was taken in isolating the bone from its important connections, and it was divided with a saw at the point above indicated, with the hope that the external third might be saved. On a more careful examination of the latter, however, it was found to be in an unsound condition, and was removed to its junction with the acromion. The inter-articular cartilage at the sterno-clavicular articulation was softened, and a considerable portion of it had disappeared. The internal third of the bone was disorganized, beyond the power of reparation or of removal, unassisted by art. The operation being completed, a little lint was introduced, the integuments brought together, and the whole neatly dressed by Dr. Wood, under whose skilful attentions the patient was enabled in ten days to attend to his business. Three weeks have now elapsed since the operation, and not an unpleasant symptom has appeared; nor are there any indications of the extension of the malady to the sternum.

CASE VI. *Successful removal of the entire left scapula, after recovery from amputation at the shoulder-joint.* By Prof. Rigaud, of Strasburg, France. *British and Foreign Med.-Chir. Review*, 1844.

An old soldier, who had served in the Imperial guard during the campaigns of 1813, 1814, and 1815, had been for several years distressed with uneasiness and pain in the upper part of his left arm. In the course of time, a hard tumor formed there, being attached, it was thought, to the humerus: it was extirpated, and the wound healed kindly. Six months afterwards it was deemed necessary to amputate the limb at the shoulder-joint, in consequence of the cervix of the bone having become decidedly diseased. The round head of the humerus, as well as the surface of the glenoid cavity, was at this time most attentively examined and pronounced to be entirely free from any morbid alteration. This operation also succeeded perfectly. Little more, however, than half a year after its performance, the patient began to experience pains in the cicatrix, and ere long a new tumor formed in the side of the axilla. As this increased in size, the pains became more severe. It had already attained the bulk of a closed fist, when the case again came under the observation of Professor Rigaud, of Strasburg. The swelling was evidently of an osseous nature, and seemed to be attached to the cervix of the scapula; it was free from any adherence to the parietes of the chest, following all the movements of the shoulder. The clavicle seemed to be quite intact. After a tedious dissection, the entire scapula, having the tumor affixed to it, was extirpated, the clavicle having been first cut across with a chain saw passed under it. The cure was complete in the course of two months.

CASE VII. *Successful excision of the right scapula, for osteo-sarcoma; subsequent death from an affection of the chest.* By S. D. Gross, M. D., Prof. of Surgery in the Jefferson Med. College. *Western Jour. Med. and Surg.*, 1853.

Matthew Gracey, aged forty, a gentleman of small stature and delicate frame, of a nervous temperament, and a merchant by occupation, of Eddyville, Caldwell County, Kentucky, applied to me in September, 1850, on account of an enormous tumor of the right shoulder, which he at first perceived about nine years before. His general health had always been good, and was so at the time of his visit. He was not conscious that his shoulder had ever received any injury, and no disease of a similar kind ever existed in any member of his family.

The tumor was fifteen inches in its vertical diameter, and fifteen inches and a half in the transverse. Its surface was perfectly smooth, except at one point, a little above its centre, where it was slightly tuberculated. It was hard and incompressible in its entire extent; the skin was perfectly sound, and there was no enlargement of the subcutaneous veins. By taking hold of it, it could be moved about from side to side, and lifted somewhat from the subjacent parts. Its superior limit corresponded with the shoulder-joint, anteriorly it projected into the axilla, and below it reached as far down as the ninth rib. Pressure upon the tumor produced no pain or uneasiness, except at its upper extremity, near the edge of the trapezius, where it was, and had been, quite tender for some time. During the last three months the swelling has been the seat of a dull, heavy, aching pain, extending up the neck, and down the right arm as low as the elbow, most distressing at night, and always aggravated by the recumbent posture, probably in consequence of the pressure of the bed. The patient was unable to raise the corresponding limb without the aid of the sound one, and the shoulder was sensibly dragged forwards towards the axilla by the weight of the tumor. The outline of the scapula could be distinctly traced only behind and above.

The tumor had increased rapidly within the last twelve months, and had, in great measure, disqualified Mr. Gracey for the active duties of his vocation. Four years ago, when he first consulted me respecting it, and when I strongly advised an operation for its removal, it was scarcely the size of a large fist, and entirely free from pain and inconvenience.

Having prepared my patient's system by purgatives, rest, and a properly regulated diet, I performed the operation of excision, on the 26th of September, in the presence of my friend Dr. James Johnston, Professors Miller and Rogers, and Drs. Colescott, Raphael, Thompson, Trabue, Clark, Washington, and Murray. A full dose of chloroform having been administered, an incision sixteen inches in length, was made from the superior angle of the scapula to the inferior extremity of the tumor, its direction being obliquely downwards and inwards. Another, beginning about five inches below the upper end of the first, and terminating about the same distance from its lower end, was then carried, in a curvilinear direction, so as to include the small oval flap of skin with the tubercle, previously alluded to, in its centre. The integuments, which were exceedingly dense and thick, especially at the superior part of the tumor, were then dissected off from the surface of the morbid growth, first towards the spine, and then towards the axilla. Having detached the levator and trapezius muscles, I sawed through the acromion process of the scapula just behind the clavicle, and then divided the broad dorsal and anterior serrated muscles. Carrying my fingers next underneath the tumor, and raising it up, I severed its connections with the ribs, cut the deltoid and other muscles of the arm, sawed the neck of the scapula, and thus removed the entire mass with comparatively little difficulty.

Several vessels were divided in the early stage of the operation, at the posterior and middle part of the tumor, but these were easily controlled by the fingers of my assistants. Several arteries near the neck of the bone bled so freely as to demand the ligature after the removal of the morbid growth. About twenty-four ounces of blood were lost. The patient became very faint towards the close of the operation, and cordials were necessary to revive him.

The immense wound thus produced was dressed with three interrupted sutures and adhesive strips, and supported by a compress and a broad body bandage. The patient was placed in bed, and immediately took one grain of morphia.

At four o'clock in the afternoon there was a slight oozing of blood from the wound, and the patient complained of the tightness of the dressings, which, however, were found to be sufficiently loose. He had taken half a grain more of morphia, had slept some, and was free from pain: the pulse was 76, and of good volume, and there was no nausea, urgent thirst, or restlessness. On the following evening, Sept. 27, the patient having slight traumatic fever, was ordered ten grains of calomel with one of opium and one of ipecacuanha, to be followed in the morning by castor oil.

No untoward symptoms of any kind occurred after the operation; nearly the whole wound healed by the first intention; and, at the end of three weeks my patient went home, with every prospect of a long and prosperous life. In descending the Ohio River, however, which was at that time exceedingly low, and which caused his detention upon the way for nearly a fortnight, he took a severe cold, from the effects of which he never completely recovered. A harassing cough set in, accompanied by all the symptoms of pleuro-pneumonia, which were followed, about the middle of December, by those of hectic fever, under which he gradually sank, three months after the operation.

Soon after Mr. Gracey reached home, a small fungus was noticed in the course of the lower angle of the wound, which gradually increased in size, was very red and painful, occasionally bled a little, and obstinately resisted every effort that was made to heal it by his physicians, Drs. Carson and Champion. The latter of these gentlemen writes thus in relation to my patient's general illness:—

“When Mr. Gracey got home, he had a severe cough, which he thought depended upon cold he had caught in descending the Ohio River. The cough continued to increase, becoming more and more annoying, and was soon followed by severe pains, of a pleuritic character, in the chest. These pains frequently lasted for hours at a time, and generally required morphia for their relief; in the intervals, the lungs were always much embarrassed, the respiration being quick and hurried. His suffering, in fact, was constant; he had no appetite, and could not sleep, except when under the influence of anodynes. He became excessively emaciated, and a few days before he expired his reason gave way.”

It is to be regretted that no *post-mortem* examination was made, as this would at once have revealed the true state of the thoracic viscera, and shown whether there was any cancerous disease at the side of the fungus, or elsewhere. If Mr. Gracey really had pleuro-pneumonia, as was supposed by his attendants, and if this disease, contracted while he was detained on board a steamboat, was neglected, it is not improbable that the fungous growth was not of a specific character, but the effect merely of ordinary unhealthy action.

The neck and the glenoid cavity of the scapula were perfectly sound, as were also the various muscles connected with the tumor, the posterior surface of

which was covered by the spinate muscles, in a state of great expansion and attenuation. The morbid mass weighed seven pounds and two ounces immediately after its removal, and belongs to the kind of structure usually, though vaguely, denominated osteo-sarcomatous.

CASE VIII. *Exsection of the ulna and radius; useful arm resulting.* By Dr. Compton, of New Orleans, now Prof. of Surgery in the Medical School of that city. New Orleans Med. Register, 1852.

Thomas Harris, æt. 15, admitted during the month of February for a lacerated wound of scalp and ear; fracture of inferior maxillary and humerus; compound comminuted fracture of radius and ulna.

These injuries were received on board the English ship Manchester. It appears that the boy was sleeping on the anchor chain, and that the anchor was suddenly let down; in its progress, the chain caught the arm and produced the injuries above mentioned. When the boy was admitted, the wounds had been dressed for several days, and from want of proper attendance and care, were in a very filthy condition. The arm especially was in a sloughing state, and both radius and ulna were actually shattered to pieces, and protruding several inches out of the mass of muscles.

By the 18th of April, the boy being well of all the other injuries, Dr. Compton determined to remove both the radius and ulna. He made a straight incision the whole length of the inner side of the radius, and a counter opening opposite the olecranon process. Having dissected out both bones carefully, and disarticulated them at the elbow, he removed them entire, with the exception of a portion of the lower end of the radius. A great portion of the periosteum was detached from the bones, and left in the wound. The usual treatment for such operations was then followed and the patient improved rapidly, and the wound had nearly healed, when several abscesses formed on the forearm. These abscesses were, according to Dr. C.'s opinion, produced by pieces of bones which had been left in the arm. His opinion was well grounded, for several spiculae of bones came out of the wound, and the arm immediately assumed a healthy condition, and is now well. The arm is about two or three inches shorter than the other, and is perfectly firm. It remains at a right angle to the humerus, and can be flexed and extended so that the hand moves through eight or ten degrees of an arc of a circle. He has entire use of the hand; he can both open and shut it, and he grasps objects quite firmly.

The pulse in that arm can be felt as well as in the other.

CASE IX. *Exsection of the entire ulna; use of the arm preserved.* By J. M. Carnochan, M. D., Prof. of Surgery in the New York Medical College. American Medical Monthly, 1854.

P. Cavanagh, a native of Ireland, aged 30, of sanguineous temperament, strumous aspect, without syphilitic taint, a shoemaker by trade, while splitting wood with a heavy axe, sprained his arm so severely that, as he expresses it, the sinews seemed to give way. During the night following the accident, he was awakened by intense pain about the region of the wrist joint. This was speedily succeeded by swelling of the forearm and arm, as high up as the humero-scapular articulation. In this condition, he consulted a physician, who prescribed an anodyne liniment, to be applied to the arm. The application was used for five weeks without abatement of the pain. Fomentations of hop leaves were then resorted to. These failing to bring relief, and the malady still progressing, the patient sought the advice of Dr. Webster, of Geneva, who made along the arm two deep incisions, which were followed by a slight discharge of pus and much blood. Cataplasms

were then used for about eight weeks, with no relief to the pain or diminution of the tumefaction. In the month of July, 1852, Cavanagh entered as a patient the surgical division of the State Emigrants' Hospital.

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Operation. The patient was brought into the amphitheatre, and placed supine upon the operating-table. The assistants were arranged so as to maintain firmly the trunk and lower extremities, and be in readiness to hand the instruments and to sponge the wound. Chloroform was cautiously administered. While under the full influence of the anæsthetic, the position of the patient was changed so that he lay partly on the left side.

One assistant held and supported the upper arm of the diseased limb, compressing at the same time the humeral artery; another seizing the hand and wrist, rotated inwards the limb from the shoulder-joint, and carried the pronation of the forearm so far as to cause the palm of the hand to look directly outwards. The elbow-joint was now slightly flexed, and the hand elevated. This twisted position of the ulna upon the radius placed the ulna upon the posterior and outer aspect of the forearm, and rendered it more easily accessible.

The limb thus placed, the assistants maintaining the arm and forearm steadily, standing upon the right side of the patient and placing the fingers of the left hand upon the integuments of the forearm towards the elbow, with a strong, straight, sharp-pointed bistoury, I made an incision along the posterior and inner aspect of the ulna, commencing at the lower part of its superior third and extending downwards to a point over the extremity of the styloid process. This divided the tegumentary layers and fascia, which were found dense, matted, and infiltrated. The tendon of the *extensor carpi ulnaris* was pulled back, and the bone exposed. This was found rough, enormously enlarged, and presenting numerous oval foramina and several cloacæ, which communicated externally through the integuments. It was now apparent that the bone must be disarticulated. To effect this at the carpo-ulnar articulation, a transverse incision, about an inch long, passing from the lower extremity of the first incision, was made across the back of the wrist. The superficial tissues were here reflected, and the tendon of the *extensor carpi ulnaris* was carefully detached from its groove on the lower part of the ulna. The dissection was now carried along the anterior surface of the lower portion of the ulna, and the soft parts were detached from the bone as far as the interosseous ligament, the ulnar artery and nerve being carefully avoided. The soft parts were now detached from the posterior surface of the ulna, avoiding injury to the *extensor tendons*. An attempt was then made to pass a chain-saw around the ulna through the interosseous space opposite the lower part of the middle third. This was found impossible, on account of the approximation of the enlarged ulna to the radius, and the almost complete obliteration of the interosseous space. To divide the bone at this point, a small convex-edged saw was used. The bone thus divided, the interosseous ligament was detached downwards, and the lower fragment of the ulna was disarticulated from its inferior attachments to the radius, fibro-cartilage and the carpus.

It now remained to isolate and detach the upper fragment. The first incision was now prolonged upwards along the posterior surface of the ulna, so as to end at the upper part of the olecranon, opposite its outer edge. To this a terminal incision was joined, which extended transversely across the back of the elbow-joint as far as the inner margin of the ulna. The soft tissues were now dissected from the bone upon its posterior and interior aspects, as far as the interosseous ligament and as high up as the insertion of the *brachialis internus* muscle. The bone was next seized and pulled from the radius, and a

knife, curved flatwise, was passed close upon its interosseal margin, and grazing the bone, the interosseal membrane was divided upwards, the soft parts being held apart, and the interosseal and ulnar arteries protected.

The elbow-joint was now flexed, and opened behind by entering the bistoury close to the inner edge of the olecranon, and the attachment of the triceps extensor was next divided by cutting directly outwards. The ulnar nerve was now found, and hooked aside until further dissection of the soft tissues was effected from the inner aspect of the joint and the upper part of the bone. The lateral ligament was next divided. The bone still remained firmly attached, chiefly by the coronary ligament and the insertion of the *brachialis anticus*. The ulna was carried backwards so as to make this muscle tense, and by carefully grazing the coronoid process with the knife the tendon was detached. Some difficulty was here presented in avoiding the humeral artery, which lay in close proximity to the enlarged coronoid process. The bistoury was now passed between the ulna and radius, and the coronary ligament divided. A few remaining fibres were divided, and the bone was completely detached.

During the operation there was considerable venous hemorrhage, which soon ceased upon removal of compression from the upper arm. The arterial bleeding was arrested by torsion of a few arteries about the elbow-joint.

The patient fully recovered and the functions of the arm are preserved.

CASE X. *Successful extirpation of the right patella, for caries.* Lancet, 1829, vol. xviii.

J. Hix, ætat. 16, of a serofulous constitution, was affected in 1826 in consequence of a violent contusion at the upper part of the right leg, with intense inflammation, terminating in profuse and tedious suppuration. The wound healed in about half a year after the accident; but towards the beginning of 1828, having struck his right leg against a wall, on the day after the accident the knee swelled greatly, and became hot and very painful; under the application of poultices, the inflammatory symptoms subsided, but a considerable quantity of matter formed under the integuments, which slowly ulcerated; the healing of the sore was protracted by the indocility of the patient; so that, ultimately, after frequent exposure of the wound to irritating causes, the ulcer became deeper, and at last affected the patella. At the beginning of 1829, the patient was placed under the care of M. Thirion of Namur, who, on examining the wound, found that he could pass a probe through the patella into the joint, and that sometimes there was also a discharge of synovia from the ulcer; the joint itself did not appear to be affected, and the patient could bend the limb freely, and without pain. Under these circumstances, M. Thirion consulted with several of his colleagues with regard to the best curative method, and eventually, after it had clearly been made out that the joint was free from disease, came to the determination to apply the actual cautery; or if, during the operation, it should be found that the bone was so extensively affected as to expose the articular cavity to the action of the fire, to perform the extirpation of the patella. On the 20th of April, 1829, the operation was performed in the following manner: Two crucial incisions were made over the patella, and the flaps dissected off with some difficulty, on account of a very thick fibro-cartilaginous structure which had formed between the skin and the subjacent parts. The patella, being thus laid bare, was found to be diseased to a much greater extent than had been supposed; the upper portion of it was almost entirely destroyed; some fragments were quite loose, others but slightly adhering to the bone, and the articular cavity was largely exposed: the idea of applying the cautery was accordingly given up, and M. Thirion immediately proceeded to remove the carious bone; the index finger of the left hand was

introduced into the joint, a straight bistoury carried along it, and the fibro-ligamentous tissue round it divided. The articular surfaces of the femur and tibia were found healthy. The wound was immediately closed by adhesive plaster, and kept united by a compressive bandage. About half an hour after the operation, which appeared to be extremely painful, the patient became very restless and delirious; he passed, however, a quiet night. For some days he was a little feverish, but without much pain, and there was no recurrence of the delirium; on the fifth day, the bandage was removed for the first time; the adhesive straps were, however, suffered to remain, as there was no swelling, and but very slight suppuration; some lint was placed over the wound, and the bandage applied as before. On the tenth day the adhesive plaster was removed; the wound had almost completely united; a small portion of it only which was not closed, was surrounded by tendinous parts; the articular cavity was filled with albuminous matter. No alteration was made in the application of the bandage, and the patient still kept at complete rest, and on spare diet; some portions of tendon sloughed away, and towards the beginning of August the wound was completely closed. It was, however, not before the end of September that the patient began to use his limb with the aid of crutches and a knee cushion. At the time when the report was made, on the 30th of October, he was able to walk with a stick, the anchylosis being incomplete, so as to enable the patient to bend the knee slightly, though with some pain when the knee-cushion is removed, the constant use of which was accordingly recommended.

SECTION IV.

EXSECTION OF JOINTS.

CASE I. *Morbus coxarius; first exsection of the hip-joint successfully performed; subsequent death from phthisis.* By Mr. Anthony White, of Manchester, England. *Lancet*, 1849.

He it who first excised the head, neck, and trochanters of the femur, the patient surviving the operation twelve years, and then dying consumptive.

The preparation illustrative of this interesting case is preserved in the Hunterian Museum. The following account is from the pen of the lamented deceased:—

“Four years and a quarter before the excision of the bone, the patient, a boy, at that time nine years old, was thrown down. The injury was followed by disease of the hip, which was treated by leeches, blisters, rest, and other usual means. Large abscesses formed, and burst around the joint, with extreme pain, and copious discharge of pus; and the head of the femur was dislocated far on the dorsum ilii. The patient was reduced to a very debilitated state; and during the two years and a half in which the discharge continued, became exceedingly emaciated; but for some months before the operation no fresh abscesses formed, and the progress of the local disease appeared to be checked.

“Mr. White ‘removed the head and neck of the femur, with a portion just below the trochanter minor, from the dorsum of the ilium.’ ‘The operation was effected by dividing and separating the integuments from a little above the point of lodgement down to that opposite the side of the acetabulum. At this point the bone was divided with a small, straight saw, about two inches below the top of the great trochanter, raised with a spatula, and then carefully detached from the ilium. The knee, which had long been immovably imbedded in the opposite thigh, was now with facility brought

into a straight line, and the whole limb was secured with a long splint, and treated as a compound fracture. The wound quickly healed, the various sinuses soon ceased to discharge, and the health of the patient rapidly improved. Within twelve months a most useful compensation for the loss of the original joint was obtained. Perfect flexion and extension, and every other motion, except the power of turning the knee outwards, were restored; but the femur did not grow after the operation."

CASE II. *Successful exsection of the head of the femur and removal of the upper rim of the acetabulum for morbus coxarius.* By Lewis A. Sayre, M. D., Surgeon, Bellevue Hospital, New York. *New York Journal of Medicine*, 1855.

On the 20th of March, 1854, I was called, in consultation with Dr. Throckmorton, to see Ellen G., 297 5th street, aged nine years, who had been suffering for 18 months with morbus coxarius of the left hip, which was supposed to have resulted from a fall. She had been treated with issues, blisters, etc., together with the general tonic and antiscorbutic remedies adapted to such cases; but the disease continued to progress, until an abscess was discovered, involving the whole upper front and inner portion of the thigh, accompanied with repeated chills, profuse sweats, and great prostration.

When I first saw her, this abscess had pointed in two places, and was apparently just ready to open; the point nearest the surface and most fluctuating was just by the anterior superior spinous process of the ilium, immediately in contact with the attachment of the tensor vaginae femoris muscle, and Poupart's ligament. The other place of pointing was about five inches below the ligament, just over the femoral artery; pressure on any part of the upper portion of the limb distended both of these pointing abscesses, showing communication between them.

The leg was shortened $2\frac{1}{4}$ inches, and turned inwards, but *not permanently fixed in its position* (as is usual), but allowing of considerable motion, which gave a distinct *bony crepitus* between the femur and ilium. The pelvis was twisted and drawn upwards. Her general health had become much affected, having lost her appetite, and she was suffering from hectic, with constant chills and profuse sweats, and was only rendered comfortable by the constant use of anodynes.

I advised a free opening of the abscess, and, if necessary, to remove the head of the femur. At first this was objected to; but, as the child's health rapidly failed and death seemed inevitable, the father, in a few days, consented to the operation. Accordingly, on the 29th of March, 1854, assisted by Drs. Throckmorton, Drake, Thebaud, Bauer, and Bertholf, I proceeded to perform it.

I first laid open the abscess by a free incision of about six inches, over the trochanter major, on the outer aspect of the thigh, and in a line with the femur, and then cut into the floor of the abscess (which principally occupied the inner and front portion of the thigh), and discharged about a pint of thin serous and flaky pus. The finger was then readily passed around the neck of the femur, and detected an opening in the capsular ligament on the inner surface of the neck. The upper border of the acetabulum had been absorbed, and the head of the femur was upon the dorsum of the ilium, near the anterior superior spinous process, *surrounded by its capsule* (which seemed to have been slipped up), and a large deposit of bone, apparently being an attempt of Nature to make a new acetabulum. But this cavity thus formed had no lining membrane, as the femur grated roughly upon it. I then opened the capsular ligament in a line with the external incision, and disarticulated

by bringing the leg strongly across the opposite thigh, and then, with a large pair of Luer's forceps, readily cut off the head of the femur at the lower extremity of the neck. The bone at this point appeared perfectly healthy. I was very cautious not to injure the insertion of the *psoas-magnus*, or *iliacus-internus*, or any of the rotator muscles, which are inserted just behind the trochanter major.

The upper rim of the acetabulum had been absorbed (according to the theory of Dr. March, of Albany), and the new deposit of bone, which was intended to supply its place, was denuded and carious. I gouged it off with a sharp, firm chisel, made for that purpose, and, in this way, took off a number of flakes of bone, until I came to a healthy, bleeding surface.

The anterior superior spinous process on its outer surface, and the external lip of the crest of the ilium, was black and carious for some distance, and with the forceps I easily clipped it off until I came to healthy bone. Very little blood was lost in the operation, and after cleaning away all the debris, I brought the leg into the straight position, filled the wound with lint, and dressed with a roller and cold water compress. She was then put to bed, and a cup of strong coffee was administered, after which she soon fell asleep.

The child was under the influence of chloroform during the operation, which occupied nearly twenty minutes, and was perfectly insensible the whole time.

The following extracts from my note-book, taken at each daily visit, exhibit the progress of the case :—

11 P. M. Has slept occasionally and is quite comfortable; pulse 128; skin good; vomited freely about 4 P. M.

March 30, 10 A. M. Passed a good night, without any narcotic, and slept about four hours; has had no chill; taken breakfast with a relish, and is surprisingly comfortable, considering the magnitude of the operation; pulse 120; no hemorrhage; passed urine twice.

31st. Took half a grain of opium last night; slept well; pulse 120; skin good; removed external layer of lint; found small amount of pus.

April 1. Slight fever; heat of skin and thirst; pulse 130. Administered 5 gr. Dover's powder, with addition of half a grain ipecac., every four hours.

2d. Has passed a good night, slept six hours, ate a good breakfast, and feels every way better, but is much more feeble; dressed the wound; on removing the lint, found healthy pus in abundance.

We omit the daily reports of this interesting case, but state the facts that the patient had diarrhœa, dysentery, and erysipelas during the treatment, which continued for seven or eight months. Some small pieces of bone were also removed with the suppuration. By great care, sustaining diet, etc., and allowing her to flex the body on the thigh, ankylosis was prevented, and the recovery perfect.

Nov. 1. I had not seen the case for two months, until to-day, when, to my astonishment, I found her walking on her crutches, which she has been able to do for some two weeks. Her limb appears the same length as the other, and she can flex and rotate it freely. I directed her to bear no weight upon it yet.

20th. To-day I placed her in the horizontal position, and measured her carefully, and find that there is about $\frac{1}{8}$ or nearly $\frac{1}{4}$ of an inch shortening. By taking hold of the foot, the whole body can be drawn down in bed without pain in the joint, and a pressure may be made sufficiently strong to move the pelvis and body upwards without producing any shortening of the limb. When she lies upon the back, with the leg extended upon the thigh, she can

elevate the heel sixteen inches from the bed, and flex the knee so as to bring the thigh at a right angle with the pelvis; she can rotate it internally so as to touch the other foot, and externally so as to touch the bed. Her general health is perfect, and the case has terminated perfectly successfully.

SECTION V.

DEFORMITIES IN THE EXTREMITIES.

CASE I. *Anchylosis at the hip relieved by the formation of an artificial joint.* By John Rhea Barton, M. D., late Surgeon to the Pennsylvania Hospital, Philadelphia.

The operation of establishing artificial joints as a substitute for the true joint which may have become ankylosed is essentially American in its origin. The first of this kind was performed by Dr. Barton on the 22d of November, 1826, in the Pennsylvania Hospital, on a sailor, who, while on shipboard, had received an injury about the hip, some twenty months before he entered that charitable institution. He labored now under a complete ankylosis, had the limb drawn up and turned greatly inwards, requiring the man to use crutches and wear a high-soled shoe. The operation proposed to liberate and straighten the limb, and was effected by incising the soft parts down to the trochanters, and so exposing them, to insinuate the fingers around the bone, which was then divided by a short straight saw. Not a vessel required the ligature. Desault's splint was applied, and the patient put to bed.

By gentle movements, in the course of a few months, an artificial joint was created near the trochanters, which enabled the man not only to walk without support, but actually to go out gunning. From irregular habits, however, this new articulation became in the course of time much restricted in its motion.

CASE II. *Operation for bow-shins by a quack.* Sir Astley Cooper's Lectures. *Lancet*, 1826, vol. ii.

While I am on this subject, I will mention a case to you which occurred in this town, and which I should have scarcely believed, if it had not come within my own knowledge. A person in this metropolis happened to have bow-shins. It was a part of his duties to teach ladies to draw and paint, and in the prosecution of this branch of his profession, he found his bow-shins, as he himself declared to me, a very great evil. He felt that his merits were less fairly appreciated, and his instructions less kindly received, by reason of the convexity of his shins; he was persuaded, in short, that his bow-shins stood between him and his preferment. Under this impression, he went to a very noted person in this town, and showing him his bones, said to him, "Pray, sir, do you think you can make my legs straight?" "Sir," said the Doctor, "I think I can; if you will take a lodging in my neighborhood, I think I can scrape down your shins, and make them as straight as any man's." A lodging was taken; the father of the patient assisted in the operation, and all three of them—the father, the son, and the doctor—took a turn in scraping down the convex shins. A great deal of rasping was required; an incision of very considerable extent was made in the skin, the integument was turned aside, and an instrument which was at that time contained in the surgeon's case, called a rougee, was employed to scrape the shin-bone. When the doctor was tired of rasping, the father took a spell, and the patient, in his turn, relieved his father. At last the shell of the bone became so thin, that the doctor said they must proceed

no further with that leg. The other leg was then rasped in a similar manner, and thus large wounds were produced in both of the shin-bones. The surfaces granulated very kindly, and very little exfoliation of the bones took place; but unluckily the granulations would form bone, so that up jumped the bones of the shins again. The doctor, however, was resolved not to be defeated, and accordingly put a layer of arsenic over the whole surface. It was in consequence of the effects of this application that I saw the patient. The arsenic was absorbed into the system, and he became paralytic in his arms and lower extremities. A great number of exfoliations took place in his legs; and he showed me a large box, in which the exfoliated portions of bone were contained. I recommended him to go into the country, and he went to Bath, where he staid for some time, and got rid of his paralysis. This case made a great deal of noise in town; and there were some surgeons who expressed a strong wish to prosecute the doctor. I recommended them, however, not to take any steps until I had seen the patient himself; and when he came next to me, I asked him whether he thought his legs improved, and whether he would again undergo the same operation, at a similar hazard of his life, to have his legs made a little straighter? He replied that he would, and under these circumstances I was of opinion that, as the young man was content, it was folly to think of prosecuting the doctor. The patient, in this case, appeared to be as great a fool as the doctor whom he consulted, and deserved to be punished for his folly. I have no wish to injure individuals, and I shall not, therefore, mention the name of the operator. Some time has elapsed since the case occurred, and the transaction is now almost buried in oblivion. One of the parties is since dead; not the person, however, who underwent the operation, for he still lives, and is proud of his improved legs.

CASE III. *Account of a patient who could lengthen or shorten his inferior extremities three or four inches.* Lancet, 1827, vol. iii-iv.

MM. Richerand and Jules Cloquet exhibited one of the patients from the Hospital St. Louis, whose inferior extremities could be lengthened or shortened, when the man liked, to the extent of three or four inches. From several pathologico-anatomical observations, it was judged that this affection arose from a destruction of the heads of the thigh bones, and from erosion of the parietes of the cotyloid cavities. The patient is fifty years of age, walks with extreme difficulty, but without pain. Whilst resting the body on either limb, it becomes shortened, and the trochanter major touches the crista of the ilium; but when, on the contrary, he raises it, it elongates and returns to its natural size. In this same patient there are several exostoses in different parts of the pelvis, and numerous large osseous tumors in the substance of the muscles.

CASE IV. *Singular malformation; feet, etc. of colossal dimensions.* Lancet, 1830, vol. xviii.

The *Gazette Médicale de Paris* relates the case of a young man of middle stature, and rather confined intellect, who is affected with the following malformation: His right foot is of extraordinary size, seventeen inches in length, and nine in breadth; the toes several inches in length, and their phalanges very movable; the great-toe is situated in the middle of the internal margin of the foot, so as almost to form a thumb. The left foot is not quite so large as the right, although of colossal dimensions; the great-toe is also attached in the middle of the inner margin. The thighs and legs of the individual are of natural length, and though the development of the muscles corresponds to the immense weight of the feet, he walks with great difficulty; the upper ex-

tremities are remarkably thick, and if compared with the lower, the hands appear like those of a dwarf, with the feet of a giant. In other respects the young man is well formed, and enjoys good health, except that he has from his infancy been affected with slight ichthyosis of the lower extremities and abdomen.

CASE V. *Successful operation for knock-knees by exsection of portions of the tibiæ.* By Dr. Mayer, of Hamburg. *Lancet*, 1853.

John H——, a strong and healthy-looking boy of fifteen, son of a baker, and employed in his father's business, was found, on admission into the Orthopædic Hospital at Würzburg, to have the right leg diverging about seven inches, and the left about eight, from the direction of the corresponding thigh.

On the 14th of August, 1851, the lad having been put under the influence of chloroform, Dr. Mayer made an incision beginning three-quarters of an inch below the insertion of the ligamentum patellæ, and curving downwards so as nearly to surround the front and inner (or mesial) side of the head of the tibia. He then turned the flap upwards, and divided the periosteum in the line of the first incision, and afterwards, with Heine's cutting needle, separated the periosteum from the outer and posterior surface of the tibia, so as to prepare for the use of the saw. To protect the soft parts in that situation during the sawing, a strip of watch-spring, about half an inch wide, was introduced between the denuded bone and the periosteum. Dr. Mayer then, with a round saw, made two incisions converging towards the posterior part of the tibia, and meeting about a line and a half from the surface, without, therefore, quite cutting the bone in two. The wedge thus excised was about five inches thick at its base, and was easily removed by forceps. The wound was cleared of bone-dust by forcible injections of cold water, after which, through the flexibility of the remaining isthmus of the tibia and the mobility of the fibula, no difficulty was found in bringing the cut surfaces of bone into close apposition. The outer wound was brought together with the greatest accuracy by needles and ligatures (as for hare-lip), the hemorrhage being quite inconsiderable. The leg was then put into one of Boyer's hollow-splints, used for fracture of the patella.

Half an hour after the operation, as, through the perfect apposition of the divided parts, no discharge of any kind was visible, the wound was covered with a thick layer of collodium, and upon this drying, the ligatures and needles were removed. The traumatic reaction was very slight, and on the fourth day the external wound (five inches long) had perfectly united. The leg was now left quiet in the splint for twenty-three days, when Dr. Mayer had the pleasure of finding that the incised surfaces of bone had united also. The next day the patient was allowed to walk in his room with crutches, and a few days afterwards in the garden without any artificial support whatever.

On the 3d of October the other leg was operated on in the same manner and with the same success. He left the hospital, free from deformity, and with a firm and natural gait, on the 19th of November.

SECTION VI.

SOME SINGULAR AFFECTIONS OF THE EXTREMITIES.

CASE I. *Elephantiasis of the right inferior extremity successfully treated by ligature to the femoral artery.* By J. M. Carnochan, M. D., Prof. of Surgery in the New York Med. College. *New York Journal of Medicine*, 1852.

Charles Roller, a merchant, of lymphatic temperament, and short stature,

æet. 27, born in Aix-la-Chapelle, left his home in December, 1849, landed in New York in February, 1851, went thence to Connecticut, where for eight months he worked in a factory, standing during his hours of labor; then went to Virginia, where he worked on a farm for about six months, at the expiration of which period he was taken with fever, of an intermittent character. Up to that time he had always been in good health.

During the fever, the inguinal glands became swollen and painful; the swelling and pain extending in the course of the femoral vessels as far as the knee. The pain was followed by swelling and redness of the thigh down to the knee. From the knee, the pain and swelling continued to extend downwards as far as the toes; being at this time confined chiefly to the portions of the limb along the course of the saphena vein, and also of the posterior tibial vessels. The redness and tumefaction here, as in the thigh, were preceded by deep-seated pain. The tumefaction of the limb continued to increase; while, at the same time, febrile exacerbations occurred at intervals, varying from two to six days. After a period of about six weeks from the commencement of the disease, the fever entirely disappeared, and by this time, also, the pain and redness had entirely ceased; the limb, however, remaining hard, swollen, and rough, and presenting, in a marked degree, the peculiar characteristics of elephantiasis Arabica, in the chronic period of the disease. From this time forward the hardness and intumescence gradually increased, and the limb became so cumbersome that the patient was obliged to give up all business, and confine himself chiefly to a recumbent posture. In this condition, the patient left Virginia for the purpose of seeking medical relief at the New York Emigrants' Hospital, into which he was admitted on the fifteenth of January, 1851. The appearance of the patient upon entering the Hospital was somewhat emaciated. He had no febrile symptoms, and the chief difficulty under which he labored arose from the enlarged and hypertrophied condition of the right inferior extremity.

The limb was enlarged from the toes to within a short distance below Poupert's ligament. The thigh, although enlarged, was not much indurated; while, from a short distance above the patella downwards, the limb presented a dense, hypertrophied, hard, scaly, shapeless mass.

The morbid condition of the tissues pervaded the foot and toes, there presenting groups of tuberculated growths. The circumference of the limb around the ankle was nearly as large as that of the calf; measuring fifteen and a half inches, while the circumference of the calf measured nineteen and a half inches.

The patient was put under treatment upon entering the hospital. The recumbent posture was enjoined, and for some time various discutient lotions were used. Bandaging was resorted to, with frictions of ung. potass iodid.; the iodide of potassium being also prescribed internally.

At times, also, the limb was painted with strong tincture of iodine; local and general baths were used, regular bandaging of the limb, from the toes upwards, being the while carefully observed.

This plan of treatment was perseveringly adhered to from the fifteenth of January to the twenty-second of March, a period of a little over two months, without any amelioration. Having thus tried, without success, the method of treatment most approved of, I proposed to place a ligature upon the femoral artery, with a view of changing the morbid condition of the structures supplied by the branches of this arterial trunk. A consultation was held, and my proposition was acceded to as preferable to amputation, the usual alternative resorted to in this stage and extent of the disease. Accordingly, on the twenty-second of March, 1851, I secured the femoral artery a short distance

below the origin of the arteria profunda. Upon exposing the femoral artery, this arterial tube was found to be changed, so as to present an appearance somewhat like the color of the aorta of the ox, and to be larger than the common ilia of the human subject. In consequence of this appearance of the artery, after some hesitation I applied the ligature, preferring to do this, rather than to expose the external iliac, of the soundness of which I could not be certain.

The ligature came away from the femoral artery on the eleventh day, accompanied by secondary hemorrhage, the occurrence of which I had expected as probable. For the purpose of arresting the hemorrhage, the *external iliac* artery was secured by ligature, by Dr. A. E. Hosack, who happened to be on duty at the time in the hospital. The external iliac was found to be about the size of the brachial artery. This, for a time, apparently had some influence upon the hemorrhage; but on the following day, bleeding was again renewed from the orifice, in the femoral artery, with as much profusion as ever.

The hemorrhage was now restrained by the prompt application of a tourniquet, on the *cardiac* side of the bleeding orifice by the house surgeons, Drs. Thompson and A. K. Smith.

This even failed to stop permanently the hemorrhage, and the blood recommenced oozing copiously at intervals. The patient was now sinking fast, and the ligature of the common iliac, or amputation at the hip-joint, appeared to be the only resources left. But the hemorrhage now being evidently reflux, it was suggested to apply the tourniquet, so as to produce compression on the *distal* side of the bleeding orifice; this was done, and was followed by a complete cessation of the bleeding,

From this time (April 4th, 1851), the house surgeon kept an instructive record of the case, which record I have now before me. For several days the pulse ranged from 115 to 108; the dressings were carefully attended to, and light diet prescribed. On the twelfth, the leg was found to be considerably reduced in size, and the ligature of the external iliac came away. On the seventeenth, brandy and quinine, with good nourishment, were ordered. On May the first, finding the leg still more reduced and the lower wound healed, I ordered tincture of iodine to be painted on the leg, and the bandage to be continued; I also ordered a solution of chloride of soda to be used as a wash on the upper wound, which continued to discharge freely.

The patient now went on gradually improving in strength and appearance, and left the hospital in the latter part of June, completely cured of his malady. At this date, sixteen months after the ligature of the femoral artery, the patient is in robust health, and presents no indications that the disease will return.

CASE II. *Rupture of the ligamentum patellæ successfully treated by adhesive plaster.* By E. K. Sanborn, M. D., of Lowell, Massachusetts. Boston Med. and Surg. Journal, 1856.

While repairing one of the public buildings of this city, two men, masons by trade, were precipitated, by the breaking of a staging, a distance of twenty-five feet on to a plank floor. One of the men received a fracture of the base of the skull, and died in consequence; the other escaped with a rupture of the ligamentum patellæ. The man was conveyed home, and a neighboring physician applied the usual dressing of a "figure of eight" bandage, with a splint behind the joint. In the course of the following night, the pain in the knee became intolerable, from the swelling and consequent tightness of the bandage, and all dressings were removed. On the following day the case was transferred to my care by the attending physician. I found the knee a good deal swollen and inflamed, and there was evidence of extensive extravasation of blood into

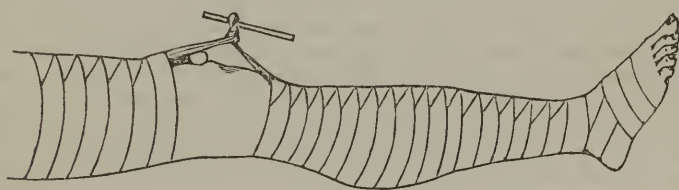
the joint and surrounding tissues. The patella was drawn up the thigh for a distance of four inches; and although it could be brought down nearly to its proper situation by the hand, a bandage sufficiently tight to keep it there could not be borne. The object to be accomplished, then, was to bring a sufficient force to bear on the patella, without making pressure on the joint or impeding the circulation in the limb. And it was accomplished in this manner: A strip of ordinary adhesive plaster, four feet long and two and a half inches wide, was applied to the limb, from the upper portion of the thigh to the middle of the leg, leaving at the knee a free loop, as shown in figure 1. A roller

Fig. 1.



bandage was then applied above and below the knee, for the purpose of securing the plaster, and controlling the circulation and muscular contraction. A small stick, six or eight inches in length, then being put through the loop over the knee, the plaster was twisted until the patella was brought nearly down to its proper situation. Before applying the *twist*, a hand compress was placed above the edge of the patella in such a manner as to bring the force to bear directly upon that bone. The appearance of the limb, fully dressed, but without the force applied, is shown in figure 2. Leeches and fomentations

Fig. 2.



were applied to the joint; and as the inflammation subsided, the plaster was tightened, until (at about the sixth day) the bone was brought fully down to its normal situation. It was there held, without the slightest uneasiness to the patient, until union took place. In three weeks the man was able to walk alone, with the plaster still applied, and the recovery was ultimately perfect. There is now no perceptible halt in the gait.

Within the last two years several cases of transverse fracture of the patella have been treated by this method, both by myself and others in this vicinity, and with perfect success. In the winter of 1854 I also had the pleasure of applying this dressing to a patient of Mr. Stanley's in St. Bartholomew's Hospital, London, when the simple inclined plane failed to bring the two fragments of the fractured patella together. The simplicity of the method, and its complete success, gained for it the warm approval of that distinguished surgeon.

CASE III. *Rupture of the left quadriceps femoris muscle; perfect union.* By C. H. Mastin, M. D., of Mobile, Alabama. *Southern Med. and Surg. Journal*, 1849.

In September, I was called to see an old man, aged 60 years, who, in attempting to replace the bed of a wagon upon its wheels, had his foot to slip, and his left leg, in a state of semiflexion, caught between the falling body and the ground. Upon examination, I found the quadriceps femoris, about an inch and three-quarters above the patella, ruptured; the patella driven down, even out of its natural position, and its ligament "loosed" outwards. Having satisfied myself of the correctness of my diagnosis, the next question was, as to the mode of treatment; how the ruptured ends should be coaptated and so retained. I extended the leg upon the thigh, and flexed the thigh upon the pelvis; a uniting compress was placed upon the thigh in the direction of the fibres of the muscle, the patella restored to its position, and a roller passed from the toes to the groin; a splint extending from the tuberosity of the ischium to the os calcis, and the roller reversed and passed over the splint down to the foot. The leg was now placed upon a simple inclined plane, which, by flexing the thigh upon the pelvis, would keep the ruptured muscle in a relaxed condition, and thus more effectually approximate the ends. The patient was now left to rest. No bad symptoms occurring, at the end of thirty days, the dressings were removed, and the double inclined plane of Amesbury was substituted; gradual flexion and extension by this means prevented ankylosis, and in forty-five days from the accident, the patient was perfectly cured.

This proves to be an interesting case, from the advanced age of the individual; from the fact that the violence of a blow, sufficient to rupture so great a mass of muscle, did not abrade the skin; and the speedy recovery, even without a bad symptom.

That the accident cannot be regarded as trivial, we have but to notice, that out of fourteen cases mentioned by Demarquay as having occurred at the Hôtel Dieu, only five may be considered as having had a favorable result. M. Velpeau mentions two cases of rupture of the tendon of this muscle, which came into La Charité in 1838, and remarks, that although it was impossible to effect union by immediate contact, still the cure was completed without the functions of the leg in either case being perceptibly disturbed.

The fact of the new substance, which unites the two ends, being ultimately transformed into a tissue resembling the original, may be the reason why ruptures of the extensor tendons and muscles do not cause lameness more frequently; the muscle being only lengthened to a small extent, its retractions eventually overcome this elongation, and in a short time the movements of the leg show but a slight derangement.

CASE IV. *Extensive injury to the foot; recovery.* By M. Whitehead, M. D., of Salisbury, North Carolina. *Stethoscope*, 1852.

On the 23d of February, 1851, Robert Barnetto, aged 14 years, an operative in the Salisbury cotton factory, had his foot caught between the roller and beater of the picking machine, and all the metatarsal bones, together with the soft parts, were divided, with the exception of an inch of the sole, by which the toes and the tarsal articulating extremities of the metatarsal bones were held to the foot. The beater is half an inch wide across its casting face, and the bones for its whole width were crushed into minute fragments. When I saw him, there seemed to be but one course to pursue—to complete the amputation. The hemorrhage had been considerable, but had nearly ceased. His father—after the danger of tetanus and the comparative worthlessness of the foot (as I thought), even if he escaped tetanus and recovered, had been

plainly stated to him—insisted upon an attempt being made to save the foot. To this I reluctantly consented. After sponging the wound well, I picked out with a small pair of forceps 10 or 12 small fragments of bone. I then placed the foot as nearly in its original position and form as possible, and measuring the sound foot to get the proper length, I supported it in this position by a splint, the width and shape of the sole of the foot, one inch longer, retaining the splint by a bandage around the ankle and fastening the toes to it by two or three turns of a narrow bandage. A few stitches of interrupted suture and two strips of adhesive plaster concluded the dressing; giving him an opium pill sufficient to produce sleep. I directed a cloth wrung out of warm water to be constantly applied to the foot. In two or three days the wound was suppurating freely and a few small pieces of bone came out on the inner side of the foot. His condition was favorable until the 10th day, when there was considerable twitching of the foot, leg, and hand of the same side. Large doses of opium controlled this, and it became necessary to use opium with diffusible stimulants for 10 days afterwards, as, whenever the opium was discontinued the twitching returned. Granulations sprang up freely and the discharge was healthy, the foot-wound healing up, except an inch on the inside, which I kept open for three months, breaking up the adhesions at every dressing. From this time it was permitted to close up gradually. It is now entirely healed (fourteen months since the accident), having its proper shape and length. There is no motion in the line of the cicatrix, and the space is filled up with bone. He wears an ordinary shoe with ease and comfort—has perfect use of the foot, and can flex or extend his toes as well as ever. There is no awkward movement or limping in walking. To-day I saw him at play with his companions, and in running he seemed as fleet as any of them.

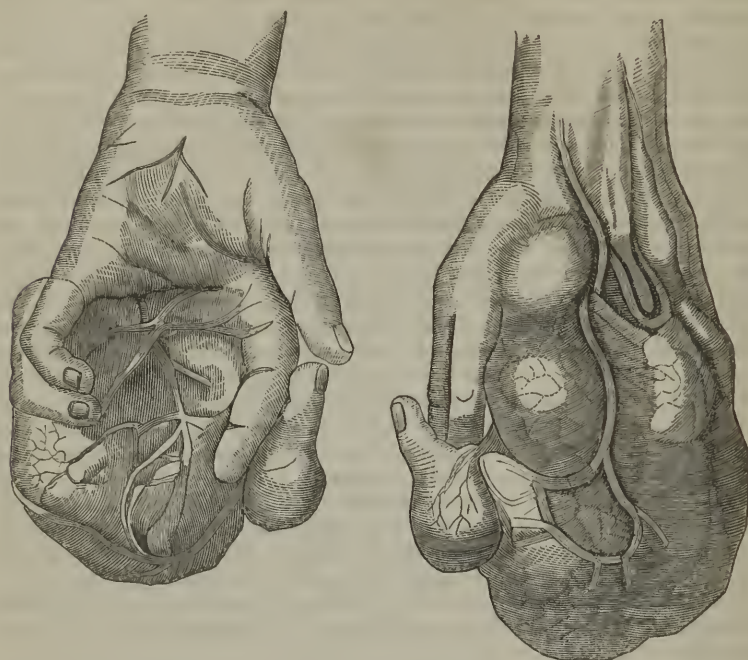
[The doctor must surely mean the *foot* when he writes toes; for, after the destruction of their tendons, how could they be flexed and extended as well as ever?]

CASE V. *Singular disease of the left hand from injury.* Graefe and Walther's Journal—Lancet, 1829, vol: xviii.

J. P. Ritzen, ætat. 18, of a strong constitution, and apparently in the full enjoyment of general health, had received, in his infancy, a violent contusion of the middle finger of the left hand, by its being caught between a door and the post. In his eighth year, the first phalanx of this finger began to swell, so as ultimately to attain to five inches in length, and four in breadth; and at the same time the second phalanx, and subsequently the third and fourth metacarpal bones and the phalanges of the fourth finger became enlarged, and gradually attained an enormous size; the tumor of the first phalanx of the middle finger was by far the largest, and had latterly begun to increase very rapidly; the two fingers were changed into an uneven tuberculated mass, divided into several lobes; and by forcibly pushing the little and index fingers towards the sides, the two last phalanges of the middle and fourth fingers had undergone a very curious transposition, presenting the following appearance:—

The tumors of the two metacarpal bones were confounded into one mass, and though contiguous, were apparently not adherent to the metacarpal bone of the index finger, which appeared to be perfectly free from disease. The tumors were very hard; the weight of the hand considerably increased, so that the patient could hardly lift it up; the thumb, index, and little finger were freely movable; a slight movement was also perceptible in the tendons of the fourth finger, and even in the last phalanx of the middle finger, when the patient made an effort to extend them. It seemed that the disease was confined to the bone; the soft parts did not participate in it; and between

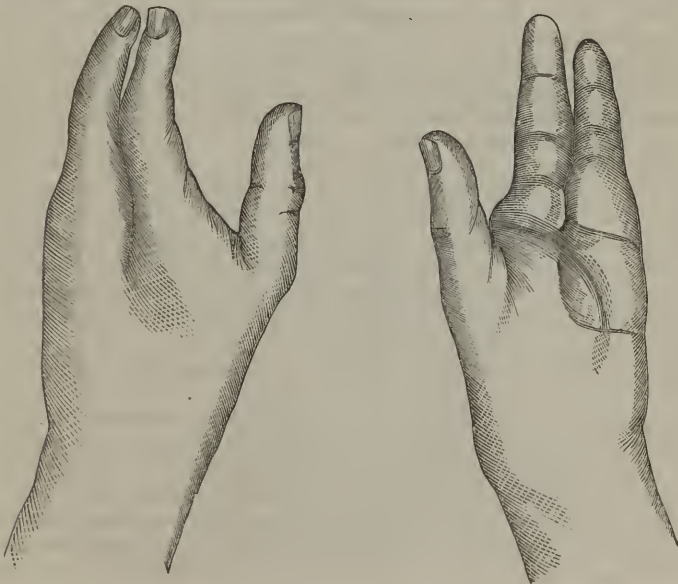
the tuberculated masses the tendons and muscles could be distinctly felt, though they had considerably wasted, in consequence of the pressure. The subcuta-



neous veins were varicose; the skin was tense, shining, and in some places adherent to the tumor, which had of late become very tender, and the patient was almost unable to let the hand hang down, on account of the violent pain it caused. Doctor Von Walther, under whose care he was, considered the case as one of *exostosis maligna* (according to Searpa's nomenclature), and decided upon removing the third and fourth fingers, and their metacarpal bones; and, if necessary, the index finger, and its metacarpal bone also.

The operation was performed on the 24th of July, in the following manner: The hand being held in supination, Doctor Von Walther, with his left hand, seized the index, and pressed it as much as possible exteriorly, whilst an assistant drew the three other fingers and the tumor in an opposite direction; an incision was now made between the metacarpal bones of the index and middle fingers, as near as possible to the latter, in order to prevent the denudation of the metacarpal bone of the index, which, however, could not be avoided at its carpal extremity, where the tumor was firmly pressed towards it. Another incision, parallel to the first, having then been made between the metacarpal bones of the fourth and little fingers, both incisions were united by a transverse one, over the middle of the metacarpal bones, first on the back, then in the palm, so that after dissecting off the skin towards the carpus, a quadrangular flap was turned back on both sides, and the carpal joint laid bare; this was divided without any difficulty, and the tumor thus removed. The metacarpal bone of the index, as was mentioned before, had at one part been unavoidably laid bare; its articulation with the carpus had also been wounded during the operation, and Doctor Von Walther accordingly decided upon re-

moving the upper third of the bone, especially as it was expected that the flaps would then be more easily brought together. The carpal joint was accordingly divided; and an incision having been made between the metacarpal bones of the thumb and index, the upper third of the metacarpal of the latter was removed by the saw. Eleven arteries were tied; the ligatures were cut off close to the knot; the flaps were brought together, and kept in contact by means of adhesive plaster, and a bandage. About an hour and a half after the operation, secondary hemorrhage occurred, which ceased, however, after the application of four ligatures. Towards the evening the patient was bled to fourteen ounces; he passed a good night, but on the following morning complained of violent pain shooting up the elbow; the carpal region was red and swollen, and the fever was rather high. He was again bled, had eighteen leeches applied to the forearm, and took a saline mixture, with the nitrate of potash; towards the evening, the pain and febrile excitement not being lessened, he was bled a third time. After this, and a copious evacuation, he was much better; and on the following morning the fever had greatly subsided; the swelling in the carpal region had become larger, and was rather tense. On the 27th, slight fluctuation was felt in it, and it was covered with a poultice. On the 28th, the dressings were removed for the first time; the wound was of healthy appearance, and had, in several places, united by the first intention; suppuration was moderate, and of a laudable kind. During the following days the swelling at the carpal region gradually subsided, and the purulent matter, which had apparently formed in it, seemed to be discharged through the wound. It was not observed that any of the knots came away; and it appears that most, or all of them remained inclosed in the granulations. Towards the middle of September, cicatrization had become complete, and the patient was discharged perfectly well. The index was contiguous, and, at its upper part, adherent to the little finger; the thumb was perfectly free and movable; the index was stiff, and the movements of the little finger were also rather confined.



After some months, however, when Dr. Von Walther saw the patient again, the little finger could be freely moved; and even the index appeared to have, in some respect, recovered its mobility; there was no visible trace of reproduction of the disease in any of the fingers or metacarpal bones. On examination of the removed parts by Professor Weber, the nerves, vessels, tendons, and muscles round the tumors were found healthy, though rather wasted; the periosteum was also thinner than usual, and had more the appearance of a cellular, than of a fibrous membrane. The degeneration consisted of a morbid enlargement of the first and second phalanges, and the metacarpal bone of the middle, and of the first and second phalanges of the fourth finger. It was entirely confined to the middle portion of these bones, the extremities and articulations of each of which were free from disease; the extreme portion of the tumors consisted of a thin osseous capsule, which contained a very vascular cellular tissue, the cells of which were filled with extravasated blood and gelatinous matter, similar to marrow. In some parts of the cellular mass there were traces of incipient ossification. The tumor of the metacarpus of the middle finger consisted almost entirely of osseous substance; and its external portion, in the palm of the hand, exhibited traces of a fracture, the fragments of which protruded into the mass of the tumor. The other tumors exhibited nothing of peculiar interest; no trace of the medullary canal remained in any of the diseased bones.

CASE VI. *Two large movable bodies in the left knee-joint; removal; recovery.* By John F. May, M. D., Prof. of Surgery in the Med. College in Washington City. American Journal Medical Sciences, 1852.

Tabler, aged 51, entered the Washington Infirmary in October, 1845. The left knee-joint is very much enlarged, the capsule being greatly distended by the synovial fluid, and two very large movable bodies can be easily detected floating in it. These bodies, on examination, appear to be very hard, and they can be made to pass and repass from one side of the joint to the other by slight pressure. The motions of the articulation are almost entirely suspended. He can flex it very slightly, but the effort to do this is attended with considerable pain.

The patient says that he accidentally opened the joint thirty-five years since with a hatchet, near the upper and outer side of the patella, and that a portion of the synovial fluid escaped through the wound. He also injured the joint, at twenty years of age, in jumping over a snow-bank, and was unable the next day to move it without occasioning great pain from one of the foreign bodies getting under the knee-pan. It was at this period that he discovered for the first time that there was something loose in the joint. There seemed then to be but one body, and that about the size of a grain of corn. Ever since, the joint has been subject, at different periods, to become very much distended and painful from accumulation of the synovia. This was generally the result of some injury or fatigue of the joint, for, when kept quiet, the swelling and pain would disappear.

Since February last he thinks the bodies have increased considerably in size.

He was made aware of the risk in opening the articulation to the extent that would be necessary to extract substances so large as these evidently were; but he manifested a perfect willingness to submit to an operation, as the limb was rendered entirely useless by the foreign growths in the joint, and the suffering produced by them at times, as has been stated, was very acute.

Previous to their removal, he was kept on low diet and in bed for a week, with the limb perfectly still. Leeches and cold fomentations were applied

to the joint, and his bowels were well evacuated. Having taken these precautions, the two bodies were removed in the following way : Both were first brought to the inner side of the articulation, and held there by the fingers of the left hand being placed above them. The integuments were then drawn forcibly upwards by an assistant, and an incision one inch and a half long was made down to the capsule, the opening into which was made rather less than the external one. The largest substance was instantly slipped through it, and was followed by the smaller one, not more than a teaspoonful of the synovial fluid escaping with them. The upward traction of the integuments being removed as soon as the bodies passed out, the correspondence, or parallelism, between its wound and that of the capsule was, of course, destroyed, and the further escape of the fluid and the entrance of the air was thus guarded against. The wound was closely covered with adhesive plaster, and a compress soaked in cold water was placed around the joint. The limb was put in splints, the cold applications continued, and low diet still enjoined. Not the slightest pain or unpleasant symptoms followed the operation, and the wound united throughout by the first intention. The patient was allowed to use the limb gently at the end of a couple of weeks. He soon after returned to his home in Virginia, and gradually recovered the entire use of the joint.

The measurement and weight of the two bodies, made by my colleague, Prof. Miller, was as follows :—

The largest—length *two inches* ; breadth *one inch and one-eighth* ; thickness nearly *three-fourths of an inch* ; weight *301 grains*. The smallest—length *one inch and a half* ; breadth *seven-eighths of an inch* ; weight *175 grains*.

They were very hard, being of osseous consistence. In shape, oval, convex on one side, and flat on the other. The surfaces of each presented a rough and irregular appearance, traversed by a number of smooth sulci or depressions.

They are still in my cabinet, and are the largest bodies that I have ever seen extracted from an articulating cavity.

On sawing through them longitudinally, the interior was found to be as white and almost as hard as ivory. In the largest there were a number of cells lined by a delicate epithelium. The cellular structure of the other was not so distinct, the cells being very fine. A laminated appearance also was evident in each.

CASE VII. *A cannon ball lodged in the thigh ; death.* Hennen's Military Surgery.

A shot from a heavy gun came rolling along the ground like a spent ball, towards the trenches. It rolled over that part of the banquet under which Lieutenant F—— happened to be lying down, and buried itself under the skin and muscles of his hip. He was immediately put into a dooly and carried to Dr. Anderson's tent. Upon laying down the dooly, the bearers complained of the difficulty they had found in carrying it from the trenches, owing to its having been unusually heavy on one side. Dr. Anderson, upon running his fingers into the wound, was surprised to find a mass of iron of such unusual size, that he concluded it must be part of a large shell which was lodged there. Lieutenant F—— being then moribund, the shot was not cut out till after he died, when it proved to be what Dr. Anderson called to me unequivocally a *thirty-two pound shot*. One circumstance only throws any doubt upon its having been actually a shot of this calibre, and it is this : It

was afterwards said that this shot had been fired from a gun very conspicuous, during the siege, both from its being mounted upon a high cavalier, and also from the mischief it did, and it was also said, that after the place was taken, this gun was found to be only a French twenty-four pounder, which gives a calibre of nearly twenty-eight pounds English. Whether this shot which killed Lieutenant F——— was fired from this gun I do not know, but it is certain that a shot thrown from this very gun into the head-quarter line (which was an unusual distance), and which lay during the rest of the siege near to Lord Harris's tent, was afterwards looked upon and spoken of as a thirty-two pound shot.

CASE VIII. *A grape-shot lodged in the sole of the foot; removal; recovery.* Hennen's Surgery.

A mounted officer was wounded at the battle of Waterloo by a grape-shot; it struck between his foot and stirrup; immense tumefaction of the parts, and an approach to gangrene, took place; no suspicion was entertained at the time that any foreign body was lodged, but on examination with a probe after the high inflammatory symptoms had subsided, a mass of metal, nearly as large as the closed fist, was extracted from under the plantar aponeurosis, by Dr. O'Beirne of the Royal Artillery; it was not weighed. By great attention to bandaging and position, the officer has recovered the use of the foot, and the loss of substance has been repaired.

SECTION VII.

AMPUTATION.

CASE I. *Successful amputation of the left arm, with portions of the scapula and clavicle, for carcinoma; subsequent death from disease of the lungs.* By Moses Sweat, M.D., of N. Parsonsfield, Maine. *New York Journal Med.*, 1854.

On the 3d of October, 1847, I was called to examine Ira Hobbs, in South Bridgeton, aged 27, in regard to the expediency and practicability of amputating his left shoulder, for the removal of a very large tumor, of a carcinomatous character, involving all the bones and soft parts forming the shoulder-joint and the upper half of the arm. He had suffered much from this affection for a long time, and he had as long hoped in vain that some change in the tumor might take place for the better.

I found him feeble, much emaciated, and suffering severe pain continually, from compression and irritation of the brachial plexus of nerves, excepting when he was under the stupefying effect of opium or morphine. And he was affected with distressing gastric irritation, produced, as I supposed, by the use of narcotics.

On exploring the chest, I found evident signs of organic lesion of the left lung, to some extent. The tumor was spheroidal, eight inches in diameter, hard, smooth, and uniform in its appearance. The skin was thin, from over-extension, but not discolored, except that the cutaneous veins were enlarged and blue. And though there was no ulcerated surface, the odor arising from the tumor was very offensive. The shoulder-joint was immovable, and, from the firm adhesion of the tumor to the upper part of the chest, it seemed probable that not only the muscles about the shoulder, and the scapular and pectoral muscles, but the intercostal muscles also were involved in the disease, and that it might be extending into the thorax. No particular cause could be assigned, by the patient or his friends, for the formation of the tumor, excepting that, six years before, he fell from a low building, and struck on his

back and shoulder; but there was no perceptible injury at the time, no fracture, dislocation or contusion. He was, however, after this, occasionally troubled with "rheumatic pains" about his back, neck, and shoulder. No enlargement of the parts was noticed for two or three years, and, for some time after the tumor was first discovered, it grew very slowly; but for about a year before I saw him, it had grown rapidly, and his sufferings had increased in proportion to the increasing size of the tumor. Taking the case into consideration, in all its bearings, I was decidedly of opinion that amputation, at this late stage of the disease, could not effect a cure; and although it might mitigate his sufferings in some measure, yet it seemed to be too formidable an operation for so feeble a man to bear, with no better prospect before him. I therefore advised him to continue in the use of such remedies as might best relieve his sufferings, and make him as comfortable as the nature of the case would permit, and to submit with as much patience and fortitude as possible to what awaited him; gave him such directions and prescribed such palliatives as seemed to be necessary at the time, and left him, never expecting to see him again.

About the 20th of the same month, I was called to visit him again, with an urgent request, by the messenger, to operate, if, on another examination, I should think "he would live through the operation." He said that Dr. Dunnels had rather advised to the operation since I was there. I accordingly went, and took with me my son, Dr. Wm. W. Sweat, to assist me, in case we should operate. On our arrival, we found the patient extremely anxious to have the limb removed, with the hope only of its mitigating his sufferings, during the short time he might live. Though he was at this time exceedingly feeble, and could not be raised in bed, nor elevated even at a moderate angle from a recumbent posture, without being faint, yet on the whole we were of opinion that, with due precaution in regard to securing the arteries, he would survive the operation. We accordingly made the necessary preparation; placed him on a table on his right side, with his head low, to guard against faintness. Ether was administered by a young surgeon dentist, by the name of Heald, and Dr. Jefferson Carter assisted us in the operation, which was performed as follows, viz: Commenced at a point two and a half inches below the ear, and, by two curvilinear incisions, divided the integuments anteriorly and posteriorly towards the axilla, the centre of which could not be reached by about two inches each way, on account of the fixed position of the limb and the size and pressure of the tumor against the side. On slipping back the integuments, or rather the skin (for there was no areolar or adipose tissue), the tumor presented a disorganized, though smooth surface, of a dark livid color, emitting the same odor as when covered by the skin. With our fingers and the scalpel, we soon brought down that part of the tumor which laid over and under the clavicle, and in the fossæ supra and infra spinata of the scapula, and with the saw removed such portions of these bones as were implicated in the disease, about two inches in length of each bone. Here we secured two small arteries, the posterior and superior scapular, which, coming from the subclavian, would continue to bleed after securing the axillary, which we had not yet come to. Proceeding to remove the diseased mass, we found that it had pushed itself deep under the scapula and clavicle, destroying the subscapular, subclavius, and pectoral muscles, and that it had insinuated itself between the three upper ribs, among the intercostal muscles, and, in all probability, its work of destruction was going on within the ribs. We now came down to the axillary artery, and secured it by ligature before dividing it, at the point where it assumes its name, within an inch from its exit from between the scaleni muscles. Here, too, we secured, in like manner, the axillary vein;

it being large, and fearing that it was distended beyond the capacity of the valves, we thought it safer to secure it before dividing, and thereby avoid the danger of retrograde hemorrhage, and the disastrous consequences of the rushing of air into this peculiar and important vein. These vessels and the brachial plexus of nerves seemed to be sound, with the exception of the enlargement of the vein, and a slight discoloration of the neurilemma of the nerves. These vessels and nerves were then divided, and the limb removed by forming, with one stroke of the knife, the lower angle of the wound.

The flaps, which came together well, were secured by sutures and straps in the usual manner, and the patient replaced on his bed, apparently as comfortable as when taken from it. Not having lost a drop of blood from the principal artery, and but a very few jets from the smaller ones, he was not exhausted by hemorrhage.

He was subsequently under the care of Dr. Dunnells, of Harrison, by whose judicious treatment he was made comparatively comfortable till his death, which occurred on the 27th January, 1848.

I saw him but once after the operation, and this was on the 24th of November. Up to this time he had been quite comfortable. The wound had united by the first intention the whole extent, excepting at the lower angle, where the ligatures had passed out. There was, at this time, a small tumor forming under the skin, near where the clavicle was removed; but, as it gave him no pain, and there were now unequivocal signs of permanent disease of the lungs, which was rapidly progressing, I thought it not expedient to remove it. This secondary tumor grew considerably, and remained hard till a short time before he died, when it became softer; but some time before this softened the purulent discharge from the lungs commenced, and he soon ran down.

CASE II. Amputation above the left shoulder-joint; recovery; subsequent death from effusion in the chest. By David Gilbert, M. D., of Gettysburg, Pennsylvania, Prof. of Obstetrics in the Pennsylvania Med. College. *American Journal Med. Sciences*, 1847.

The patient subjected to this severe operation was the Hon. J. Wagon-seller M. D., of Union County, Pennsylvania. In 1845 he was thrown out of a vehicle while moving rapidly, and the force of the fall was expended on the shoulder. In 1846 he sustained another fall, and the result of these injuries was an immense tumefaction and most intense pain in and about the left shoulder-joint; which depletion, external irritation, and constitutional treatment did not subdue. After various propositions for his relief, it was at last determined to amputate above the joint.

The following is the description, by Dr. Gilbert, of the operation performed:—

The patient having taken grt. l. of M'Munn's elixir of opium one hour previously, was placed upon his right side, on a large dining table, with the leaves down. This had been prepared by covering it with folded blankets and sheets, and over these an oil-cloth was spread. The axillary artery was compressed, where it passes over the first rib, by Dr. Atlee, with a compress and letter seal of large size. The arm having been given in charge of Dr. Geo. McClellan, I took my station near the upper end of the table, above and behind the diseased shoulder of the patient, and commenced an incision at the posterior border of the axilla, using a large-sized scalpel, and extended it upwards one inch above the highest portion of the spine of the scapula. The next incision commenced where the first crossed the spine of the scapula, and extended downwards and forwards to the point of the shoulder, thence upwards and inwards along the lower edge of the clavicle to the extent of

the outer third of the latter, and then upwards one inch above its superior margin. The triangular flap thus formed above the shoulder was dissected upwards, and the clavicle inside of its outer third isolated. A retractor was passed under it, and the bone thus exposed was divided with the straight edge of Hey's saw. The skin, posterior to the first incision, covering the process of the tumor which extended backwards over the dorsum of the scapula, was now reflected backwards, and the latissimus dorsi, and *teres major* muscles divided beyond the limits of the posterior extension of the disease. The *infra* and *supra spinati* muscles were next cut across, and the spinous process, immediately behind the acromion process, and the neck and body of the scapula exposed. The spinous process was cut obliquely from behind forwards and inwards to neck of the scapula with the common amputating saw. The neck, with part of the body of the scapula, was then sawn through close to the spinous process, with a long narrow instrument provided for this purpose. All the bony connections being now severed, an incision with a small scalpel was commenced at the axilla, and carried forwards and upwards through the skin and *pectoralis major* muscle, so as to expose the axillary artery (which was promptly secured), then upwards, under the clavicle, and outwards under the coracoid process, and head and neck of scapula, dividing all the remaining attachments, and the operation was concluded. But one artery besides the axillary, viz., the external mammary, required ligation. The amount of blood lost, in the opinion of all present, did not exceed ten ounces. The bleeding was principally venous, so effectually had the artery been compressed. The surface of the wound was now carefully examined, and all suspicious tissues, and remaining lymphatic glands, were removed. The patient endured the operation (which lasted fourteen minutes, including the time occupied in tying the axillary artery, with remarkable firmness, asking questions as to its progress, etc. Syncope did not take place. Immediately after the operation the pulse was small and feeble, and in frequency 134. Gave the patient weak brandy and water as drink. The surfaces of the wound were brought together and the parts adjusted one hour after the completion of the operation in the following manner: The cut extremity of the remaining (about five-eighths) fragment of the clavicle received the cut surface of the body of the scapula, both resting upon the ribs at their place of junction; the triangular flap of the integument, made early in the operation, above the acromion and outer end of clavicle, was brought down and completely covered the extremities of the bones which were in contact with each other; below this, the lateral flaps of integument were brought together, and the apposition of all the parts secured with five sutures and six or eight long and broad bands of adhesive plaster. The ligatures by which the arteries were secured, were brought out to the nearest point of surface to their place of attachment, and secured by an adhesive strip. Lint wet with cold water was laid over the wound thus dressed, and a common roller applied over and around the body. The patient was carried to his bed at twelve o'clock, precisely two hours after he had left it for the operating table. Pulse at this time 120. Continued weak brandy and water as drink, and applied cold water to wound occasionally.

4 o'clock P. M. Pulse 145; ordered gruel with brandy and water as drink. 12 P. M. Pulse 140; has slept during evening; had taken gruel; skin moist, but cool. Gave *gtt. xxx* of M'Munn's elixir of opium.

Nov. 22. Seven A. M. Found the patient refreshed, having rested well during the latter part of the night. Pulse 116, with greater volume and power; feels comfortable. Gruel for nourishment; discontinue brandy and water.

23d. Seven A. M. Patient slept during the greater part of the night. Pulse ranged from 110 to 118 during the day. No material change in the other symptoms, and treatment continued without variation.

24th. Condition of patient favorable until four o'clock P. M., when the skin became dry and warm, the pulse rose to 125, and became quicker and harder. Complains of thirst. Ordered the head and face to be sponged with cool water, and the internal exhibition of bicarb. potassa, gr. v, every two hours. The bowels having been sufficiently open since the operation, no laxative was given. 12 o'clock P. M. Febrile symptoms have declined, pulse 110, skin moist and warm, other excretions sufficiently free. Had taken gruel and a solution of gum Arabic as drink.

25th. Seven o'clock A. M. Has slept well since 12 o'clock. During this day symptoms continued favorable, appetite good, pulse 104. Continue diet and drink.

26th. Symptoms all favorable, and had rested well during the night. 10 A. M. Exposed the wound (five days after operation), Dr. Atlee present. Found nearly the whole of it united by first intention. No discharges. Some of the adhesive strips were removed, and fresh lint was applied.

27th. Case progressing favorably. Wound again exposed; presented a favorable appearance; lint and adhesive plasters renewed.

Dec. 1. Patient gaining strength. Some of the stitches removed, and other dressings renewed. Diet gradually improving. No medicine required. No discharge from the wound, it having united throughout, except some points of integument at the sutures. The general symptoms were of the most favorable character, appetite, sleep, sensations, etc., all good. The bowels being rather loose, were restrained by the exhibition of toasted rhubarb.

After this the shoulder was daily dressed, and the patient was able to return home in the spring, where he expired on the 27th of April, after suffering greatly from intermittent and neuralgia, in consequence of effusion within the chest.

CASE III. *Successful accidental amputation of the left arm.* American Journal Med. Sciences, 1845, vol. x., N. S.

A baker's boy, a youth of about twenty years of age, was engaged in raising some sacks of corn by a windlass. For the sake of a frolic he seized hold of the chain, wishing to be raised to the upper part of the granary; but he was drawn so high, that his head came against that portion of the roof through which the chain passed. Not being able to hold by the chain, he fell with his arms stretched out. In falling, his left arm came in contact with the top of a door below, which was standing open; and the force was such that the arm, which was bare, was completely separated, at about a hand's breadth from the shoulder-joint. His body fell on one side of the door, and his arm on the other. Under this extraordinary amputation the arm appeared as if it had been chopped off by an axe; the bone and muscles were as evenly separated as if they had been divided by a blunt knife, and the end of the bone was not at all splintered, a few nervous filaments only hanging from the wound. The fall of the patient must have been broken by his arm coming thus in contact with the edge of the door, for the only injuries to his person were a few contusions and abrasions about the skin of the face. He was, however, at first speechless and insensible, but he recovered his speech and consciousness in a few days. The wound bled but little; it was dressed, and the brachial artery was tied, to guard against accidental hemorrhage: the nervous filaments were cut off, but neither the muscles nor

the bone required the use of a knife or saw. Fever with delirium followed. A strict antiphlogistic regimen was adopted, and ice was applied to the head. This treatment was attended with benefit. The wound of the arm, which was at first discolored, assumed a good appearance; healthy suppuration came on, and the patient, after about two months, was perfectly restored. The stump cicatrized well, and the bone was completely covered with skin.

CASE IV. *Amputation of a finger by a ring upon it.* By D. D. Slade, M. D., of Boston, Massachusetts. Boston Medical and Surgical Journal, 1855.

The following curious accident shows that the wearing of finger-rings, "the history and poetry" of which has lately occupied the public attention, is not, under all circumstances, unattended by danger.

I was awakened at about 3 o'clock, a few mornings since, by a young man who said that he had lost the little finger of his right hand. The account given was as follows: Being a clerk in the post-office, he was busy in assorting the mails. Having occasion to reach up to a high box or shelf, he stood upon a stool, and in the act of stepping down to the floor, a thin plain gold ring, upon the little finger of his right hand, caught in a sharp projecting hook used for the purpose of attaching mail bags. Being thus for a moment suspended, as it were, by the ring, it cut its way, or, as the patient expressed it, whittled through the integuments of the finger, and finally separated the member at the last joint, the severed portion falling upon the floor, while the ring remained suspended upon the hook. A fellow clerk immediately picking it up, very nicely adjusted it, and bound round a handkerchief. About twenty minutes elapsed before I saw the patient. There having been no hemorrhage of consequence, and finding the parts in good apposition, I was desirous of seeing what nature might effect. Accordingly I merely applied strips of adhesive plaster, and bandaged. The next day, I found the patient very comfortable, having suffered little or no pain. Still giving him the benefit of a doubt, I concluded not to interfere with the dressings. Two days after the accident, however, I ventured to take a glance at the parts, and found the finger, as might have been expected, perfectly dead. Amputation was immediately performed, with the assistance of Dr. Minot, in the continuity of the first phalanx.

On examination, I found that the ring had cut through the integuments upon the dorsal surface of the finger, commencing just below the second joint, laying bare the second phalanx throughout its entire circumference, and finally severing the last phalanx at the joint. Sufficient sound integument was obtained upon the palmar surface to form a good flap.

A brief historical notice of amputation at the hip-joint.

In 1739, Morand first suggested this formidable operation. In 1743, it is said, Ravaton actually proposed to operate in a case of gun-shot wound of the thigh, but was overruled by his colleagues. In 1748, in a case of mortification involving the hip-joint, and where the separation was so nearly complete that the round ligament and sciatic now alone remained, *La Croix*, of Orleans, in France, having divided these with a pair of scissors, has received the credit of first performing disarticulation at the coxo-femoral joint; his patient living for fourteen days afterwards. In 1773, Perrault, of St. Maure, Touraine, France, next operated for gangrene and sloughing, caused by an injury, and reaching nearly to the pelvis; his patient survived; being the first successful case on record.

Mr. Kerr, of Northampton, in 1774, first performed the operation in

England. It was for hip-joint disease, and was condemned by Percival Pott. It terminated fatally. Brownrigg, in 1812, was the first Englishman who was successful with it.

The first operation of the kind in the United States was performed by Dr. Walter Brashear, of Kentucky, in 1806; it was successful. Dr. Mott, in the very next operation, was also so fortunate as to save the patient.

In Dr. Smith's statistics of amputations at the hip-joint, published in the *New York Journal of Medicine*, in 1852, we have the following results: Of 35 operations on the Continent, 14 were successful; of 25 in the English practice, 11 were successful; and of the American, of 11, 8 were successful; total 98, 56 died and 42 lived.

Account of the first three amputations at the hip-joint. Chelius's Surgery by South, vol. iii.

The first amputation through the hip-joint appears to have been performed by La Croix d'Orléans, in 1748, on a boy of fourteen, both of whose lower limbs had become gangrenous from eating diseased rye; the first operation was through the right thigh, and four days after the left thigh was amputated at the hip-joint; he seemed to be going on very well, but died on the eleventh day after the second operation.

Perrault, of St. Maure, in Touraine, first operated with success in 1773, on a man who had gangrene of the thigh nearly up to the pelvis, in consequence of his thigh having been crushed between the pole of a carriage and the wall.

The first reported case in England, but which was unsuccessful, is that operated on by Kerr, of Northampton, in December, 1774 (as appears from a letter from Harden, of Northampton, to the late Sir William Blizard, for which I have to thank my friend Curling). The patient was a girl between eleven and twelve years of age, with an abscess in the right hip-joint and hectic fever; after the operation, Kerr "found not only the acetabulum carious, but also the adjacent parts of the ossa innominata to a very considerable extent." She went on very well "till the tenth or eleventh day, but then her respiration became more difficult, expectoration ceased, her mouth and tongue were covered with aphthæ, and she died on the eighteenth day from the operation." This operation was performed with a single flap.

CASE V. *First successful amputation at the hip-joint in America.* By Walter Brashear, M. D., of Bardstown, Kentucky. Mott's Velpeau's Surgery, vol. (iii).*

PHILADELPHIA, August 13th, 1846.

My Dear Sir: In conformity to promise, I now give you a brief statement of the operation which I performed in Bardstown, Kentucky, in August, 1806, on the hip-joint.

The subject was a boy 17 years of age. Without assigning the causes which led to the necessity of the operation, the same was, after consultation with Drs. Harrison and Goodlet, conducted in manner following: First premising, that in absence of any knowledge of an established mode for this operation, a common-sense reasoning as to its safety and facility alone dictated the manner of performing it. Therefore, an operation on the thigh in the ordinary manner was determined upon, as remote from the hip-joint as circumstances might justify (in this case about mid-thigh). The amputation was performed and the arteries secured. The next step was to make an in-

* This is not in Vol. III but in Vol. II of G. C. Blackman's

4th ed. of Mott's edition of P. S. Townsend's translation of A. L. M. Velpeau's *New Elements of Op. Surgery*, 8. and N. York, 389 Broadway, N.Y. 1856, p. 270. Dr. Townsend inserts a note from Dr. Walter Brashear, dated Aug. 13, 1846, who alleges that the operation was done on a boy of 17 at Bardstown, August, 1806, and that the patient

cision to and from the lower end of the bone externally over the great trochanter to the head of the bone and upper part of the socket. The dissection of the bone from the surrounding muscles was simple and safe, by keeping the edge of the knife resting against it. The bone being disengaged from its integuments at its lower extremity, was then turned out at a right angle from the body, so as to give every facility in the operation to separate the capsular ligament and remove the head from its socket. After the operation nothing more than ordinary dressings were used, and in the course of a short time the patient removed to St. Louis, where he was living within a few years past.

I am, very respectfully,

Dr. P. S. TOWNSEND,

Translator of Velpeau's Surgery.

WALTER BRASHEAR.

CASE VI. *Successful amputation at the hip-joint.* By J. F. May, M. D., Professor of Surgery in Med. College at Washington City. Transactions American Med. Association, vol. iv.

The patient, a man 37 years of age, had been for months bedridden, on account of a serofulous degeneration of the knee, and the entire shaft and neck of the os femoris. He was reduced to the very last stage of prostration—the soft parts diseased and œdematous up to the groin; and I felt satisfied that nothing short of disarticulation of the bone afforded him any chance of recovery. The limb was at least twice its ordinary size, and from it about half a pint of pus was discharged daily.

On the 14th of November I removed the limb at the joint, in the following way: The patient was first completely anæsthetized with chloric ether. He was then placed on a narrow table, the buttock projecting well over its edge. A long and narrow knife (one-edged) was introduced just above the tuberosity of the ischium, and carried as close as possible to the bone, and pushed out on the opposite side at a point rather nearer to the anterior superior spinous process of the ilium than to the trochanter major, say about an inch or an inch and a half from the former. A flap was then cut downwards, about five inches long. Before the edge of the flap was cut through, and before the femoral vessels were touched by the knife, my colleague, Prof. Johnston, had passed his hand *back* of the knife, and caught, in his fingers, the femoral artery so securely that no hemorrhage from this vessel or the profunda occurred, when the flap was cut and raised upwards. Being divided, it was drawn forcibly upwards by Prof. J., the vessels being slightly compressed by his fingers; I then, with one or two strokes of the knife, reached the head of the bone, disarticulating it, and cut a posterior flap of the same length as the anterior one. I feared the hemorrhage most from the posterior flap, the branches here coming from the interior of the pelvis, but, with the assistance of Prof. Stone, they were compressed by the fingers until they could be separately tied.

The arteries of the posterior flap were first tied, and then the femoral, profunda, and other branches in the anterior flap. Twelve ligatures in all were applied, and not more than $\frac{3}{4}$ viij of blood were lost by the patient. The operation was performed, I was informed by those who watched the time (a matter of some moment, on account of the hemorrhage), in *thirty seconds*.

The man was totally unconscious that the limb had been touched, and manifested great surprise when told, on recovering from the anæsthetic state, that it had been removed. He knew nothing at all of the operation. The wound, which you may judge was enormous, was closed by the twisted and interrupted sutures, and dressed with the water dressing simply. The man left

the infirmary on the 26th of January, 1851, and he is now in most excellent health, having grown stout and strong. He says, in fact, his health was never better than it is at present. On sawing through the head and neck of the bone, the cancellated structure was found to be soft and diseased. The acetabulum was perfectly white and sound.

CASE VII. *Successful amputation at the hip-joint.* By H. A. Potter, M. D., of Geneva, New York. *New York Journal Med.*, 1854.

Mr. Wm. Aldrich, of the town of Manchester, Ontario Co., about fifteen years of age, received in the year 1848, an injury of the left thigh and leg, which resulted in caries of the bones; commencing at the knee-joint, the disease extended gradually upwards and downwards, implicating eventually the greater part of the entire limb. The discharge of large quantities of pus during the last five years greatly enfeebled his constitution, and undermined the general health. This condition of things seemed to demand the removal of the limb, as affording the patient the only hope of recovery.

Able counsellors were summoned to the case, and coincided with this conclusion. Accordingly, on the 1st of Sept., 1853, Dr. H. A. Potter, of Geneva, assisted by Drs. Stevens, of the same place, and Howe, of Vienna, in the presence of several other physicians, performed the operation. The patient was brought under the full influence of chloroform, and the operation of amputation commenced.

As it was thought desirable to save the superior articulation of the femur, in order to facilitate the future adaption of an artificial limb, the point selected for the operation was about three inches below the great trochanter. The surgeon, therefore, proceeded to amputate the leg in the usual manner at this place. On the removal of the limb, the parts about the ilio-femoral articulation were sufficiently exposed to allow of a more satisfactory examination of the remaining portion of the femur. This was also found in a diseased condition like that already removed, the necrosis having extended up to the joint. On consultation, it was deemed advisable to complete the operation by the entire removal of the head of the femur from its socket. This was accordingly undertaken and accomplished without much difficulty. The cotyloid cavity was found free from disease. The flaps were brought together, and the appropriate dressings applied.

The case progressed favorably, the wound healing promptly, and with no more than the ordinary amount of suppuration. It is now a little more than four months since the operation was performed, and the parts have entirely healed; the patient has recovered his former flesh, and is in the enjoyment of good health.

This was a case of true amputation of the hip-joint, in the completion of the operation, though not anticipated in its commencement.

CASE VIII. *Successful amputation at the hip-joint*, at Queen's Hospital, Birmingham. *Lancet*, 1844.

On Friday, the 1st of November, 1844, amputation at the hip-joint was performed by Wm. Sands Cox, in the presence of Dr. Warren, Dr. Nair, etc., in Queen's Hospital, Birmingham. The external iliac artery was perfectly compressed by Weiss's compressor; the thigh was removed by an anterior and posterior flap in 35 seconds. Six vessels required ligature—namely, in the anterior flap, the superficial and deep femoral, and the two circumflex arteries; in the posterior, the descending branch of the ischiatic artery, and a muscular branch. Not more than four ounces of blood were lost. Complete union of

the wound, by the first intention, has taken place, and the patient, an interesting female of 23 years of age, is now rapidly recovering.

CASES IX and X. *Two successful amputations at the hip-joint by the same surgeon in a brief period.*

It is seldom the good fortune of a surgeon to save two patients after so formidable an operation as that of disarticulating the thigh from the acetabulum. Mr. G. M. Humphrey presents, in the *Provincial Association Medical Journal*, the two following cases, in which, during the space of only six months, he twice performed successfully, amputation at the hip-joint.

Case 1. — Burd, aged about 35 years, met with a severe compound fracture of the right thigh, near the middle, from a wheel passing over it. Mr. Welch, of Saffron Walden, who saw him soon after the accident, did not think that the main vessels were injured, but considered the injury of so severe a nature that he recommended amputation. The man would not submit to this. The limb was accordingly done up with splints and bandages. For the first three or four days, though restless, he was thought to be doing well. Soon after this, it became apparent that mortification had set in. The entire limb below the fracture sloughed, and was separated by the efforts of nature, with little assistance from the surgeon. All this took place without much constitutional disturbance. Unfortunately, the sloughing of the skin extended up the limb, higher than the fracture, so that a large uncovered surface was left.

On Nov. 28, 1854, about six weeks after the accident, I went over to Chesterford to see the patient, at the request of Mr. Welch, who was of opinion that amputation at the hip-joint would be necessary. The bare broken extremity of the bone projected half an inch from the end of the stump; it was surrounded by a great granulating mass, overlying the muscles and other soft parts, which was bounded by the cicatrizing edge of the integuments. The latter, for the most part, did not reach to within six inches of the end of the stump. The man, though not unhealthy in appearance, was blanched, and had a quick pulse. He took a large quantity of nutriment, meat, wine, porter, etc.; digested it well, and seemed to thrive upon it. The granulations looked healthy. The stump was large in comparison with the corresponding part of the other thigh, but was not tender; and he could move it at the hip.

The discharge was considerable. It was scarcely to be expected that the health would long hold out under such circumstances. There was little hope of cicatrization proceeding over this extensive surface, so as to close the stump; already it was advancing less actively than it had done. I agreed with Mr. Welch that it would be the best plan to remove the part at the hip-joint, as this was the surest means of obtaining a sufficient covering of integument. Moreover, the operation in that situation could be performed more quickly than through the upper part of the thigh-bone; and the risk from hemorrhage, which constituted one of the great dangers in the feeble state of the patient, would be diminished proportionately, or nearly so. Accordingly on Dec. 17, I went to the patient's house and removed the stump at the hip-joint, and Mr. Carver rendered such efficient assistance, that very little, not above four or six ounces of blood was lost. We placed the patient with his hips projecting beyond the edge of the table. The horseshoe tourniquet was applied, with one pad upon the external iliac artery; the other upon the back of the ilium, so as not to be in the way of the incisions. This being tightened and held in its place, prevented the flow of blood through the artery. The stump was raised a little; the point of the knife was inserted an inch below the spine of the ilium, passed across the hip-joint, and protruded a little below and to the side of the anus. The inner flap was then cut by

carrying the knife downwards and inwards. Mr. Welch followed the knife with his fingers, grasped the artery between the fingers and thumb, and raised the flap. The hip-joint had been opened, and the head of the thigh-bone exposed, by this first cut. A little further division of the capsule enabled Mr. Carver, by rotating the stump, to throw the head of the femur from its socket; enough to expose the ligamentum teres, which was divided, and the bone completely dislocated. The hinder part of the capsule, and the tendons running to the digital fossa, were then cut, so as to allow the knife to pass behind the great trochanter, when the flap from the buttock was quickly formed. During this time, one gentleman with a sponge pressed upon the lower part of the anterior flap, so as to prevent bleeding from the obturator and other arteries; while another, kneeling in front of the patient, followed the knife with a sponge behind the trochanter, so as to compress the gluteal and ischiatic vessels. In this way the hemorrhage was almost entirely prevented, and we were able to proceed at leisure to tie the vessels, taking those upon either flap which first bled as they were uncovered. The femoral was about the fifth tied; the sciatic bled briskly when uncovered; the gluteal less than I expected. We took great pains to secure the vessel in the immediate neighborhood of the acetabulum, the neglect of which has been the cause of fatal hemorrhage in other cases. *Forty-three ligatures were applied.* The patient was now rather faint, so we covered up the wounds for half an hour, when he became warm, and his pulse good; and as there was no bleeding, the edges of the flaps were approximated by sutures. A pad was placed under the hinder flap, and secured there by a bandage passed round the pelvis.

Two hours after the operation, his pulse was good. There was some disposition to sickness, attributable probably to the chloroform; this continued for two days, and subsided gradually. The progress of the case, under the management of Mr. Welch, was most satisfactory. Partial union took place by first intention. Some dirty fetid pus, tinged with blood, was discharged after a few days; this soon ceased, and nothing occurred to interfere with the speedy and complete union of the flaps. I heard a few weeks ago that he was quite well and strong.

Case 2. R. Fuller, aged 27, a healthy man, blanched and thinned by confinement and disease, was admitted into the hospital June 23, 1855, with an ulcer as large as a cheese-plate on the outer side of the left thigh; its upper edge being four or five inches below the trochanter. It was flat, with a coarsely granular surface, which presented a red color, interspersed with small whitish spots. The discharge was thin and bloody; the edge smooth, not everted or raised, but decidedly indurated. At the middle was a deep depression, extending down to or into the thigh-bone. Sixteen years previously, he suffered a severe injury at this part by a thrashing machine; the skin being, he said, torn up a great way, and the ulcer left was a very long time in healing. It appears, however, to have done so quite soundly. A year ago he thought he hurt the cicatrix, by chafing it with a sack of beans he was carrying; at any rate, about that time, a sore commenced, which had been gradually increasing up to the time of his admission. There was no enlargement of the inguinal glands.

The ulcer presented the general character of a cancerous or epithelial disease, and the cursory examination made upon his admission left on my mind no doubt of that being its nature. On the morning of the 25th, I found him agonized by most painful and severe cramps in the thigh, which had come on during the night, and were evidently caused by the giving way of the bone at the part where the ulcer extended down to it. Upon the gentlest handling of the limb the muscles were thrown into action, and he shrieked out

with pain. We determined, therefore, at once to remove the limb, through the upper part of the thigh-bone, and to extend the operation if it should seem desirable. As the ulcer reached high up on the forepart of the thigh, and the cicatrix higher still, it was necessary to make the incisions very close to the pelvis, especially in front. The pad of the horseshoe tourniquet was placed above Poupart's ligament. Thrusting the knife from the outer side, a little below the great trochanter, I cut a short flap from the forepart, and then made a longer one behind, sawed through the bone, and tied the vessels. We next examined the thigh-bone. At the middle it was quite destroyed; its place being occupied for about two inches by a firm white cancerous mass. A section of the bone showed the disease extending some distance up the interior. It was not certain at what part the disease ceased; for in places, above its apparent termination, were spots in which a white soft substance had been infiltrated between the separated laminæ of the bone. In its whole length the wall of the shaft seemed to be more porous and vascular than natural; a condition which is not uncommonly met with when a part of the bone is the seat of cancer. In the knee-joint we found the cartilage removed, in an irregular and remarkable manner, from the inner side of the outer condyle. The bone thus exposed, though smooth and covered by synovial membrane, looked dark. It was evident, therefore, that no part of the thigh-bone which had been removed was in a very sound state; and my colleagues, Mr. Lesturgeon and Mr. Hammond, agreed with me that it would be the best plan to take out the remainder, now that it could be so easily done. Accordingly, with a long scalpel, I carried the incision along the front of the bone to the joint, cut through the forepart and sides of the capsule, and grasping the end of the bone with the strong forceps made for such purposes, turned the head out of the socket. Having divided the ligamentum teres, and hinder part of the capsule, I carried the amputating knife behind the bone, and cut outwards through the posterior flap already made, so as to reduce it to proper dimensions. There was some difficulty in securing the gluteal artery. By the time the operation was done, the man was very faint; for a time pulseless. However, he gradually revived. We took great pains to secure the vessels sufficiently, and waited some minutes to see if there was any bleeding. The flaps were united by sutures, and supported by a bandage, with a pad on the lower one.

No unfavorable symptom occurred till the fifth day after the operation, when hemorrhage took place. The blood flowed quickly, but stopped when Mr. Carver, the house-surgeon, who was quickly upon the spot, compressed the femoral artery. Mr. Lesturgeon and Mr. Hammond were summoned in my absence. They opened the stump and found a good deal of blood and pus. The bleeding had then ceased; and, being unable to discover its source, they left the stump open with some lint in it. The patient was very faint, and the prospect by no means bright. However, the next morning he had rallied. Suppuration took place; the lint came away after a time; no further bleeding, and no other unfavorable symptom occurred; the wound slowly healed, and the patient was discharged cured in September.

CHAPTER X.

MISCELLANEOUS CASES IN SURGERY.

SECTION I.

FOREIGN BODIES IN THE FLESH.

CASE I. *A thorn in the flesh for more than five years.* By J. R. Wardell, M. D. Lancet, 1851.

It is not very usual for medical men to be the historians of their own cases; but at the suggestion of several professional friends, I now briefly narrate the particulars of a long and tedious illness, the progress and results of which may probably be read with some degree of interest, and the case considered as one of uncommon occurrence.

In May, 1850, I began to experience an aching pain at the lower part of the thigh, about a couple of inches above the inner condyle. Being at that time more than ordinarily busy in the discharge of professional duties, and consequently having an unusual degree of exercise, I attributed the pain spoken of to some twist or strain I might have sustained, but which had been little regarded at the time, and afterwards forgotten, or to the simple effects of too much walking. A few days' rest, and riding to all my professional visits, gave relief, and I then thought little more of my lameness. Active exertion, however, soon reinduced it, and on examination I felt an induration, about the size of the little finger, lying as if in the sulcus between the vastus internus and the gracilis. Over this the skin was discolored with a slight diffused blush, and on pressure being made by the finger, the redness speedily returned.

Being one day at Mr. Benjamin Phillips's, I mentioned the circumstance of my lameness, and after showing the place to that gentleman, he recommended the application of iodine. This remedy did not, however, afford relief, and every week I became more lame. It may here be mentioned that at the time Mr. Phillips examined the part, there was a good deal of boggy swelling above the knee, more especially at the inner aspect. Mr. Phillips particularly asked if I had sustained any injury there at any previous time, as the case seemed somewhat anomalous, and perhaps the history of a former accident or affection might throw more light on the diagnosis. My reply was according to the present statement: In the latter part of October, 1845, when leaping a hedge, my horse fell upon it, and although not unseated, I was aware I had sustained an injury above the right knee. On dismounting I could walk, yet still I was conscious that, from the feeling at the moment, something had given way. After riding home, which was some few miles, I was so lame that I could scarcely dismount. My friend, Mr. Cole (Pickering, Yorkshire), examined the part, and it was the opinion of that gentleman, that there was laceration of one or more of the muscles; and this opinion proved correct, as even now there is a

nodulated thickening felt crossing the course of the rectus, and especially when the limb is flexed. There was no external injury, with the exception of two or three slight scratches. Leeches, fomentations, afterwards cold lotions, and rest, reduced the swelling, and removed the pain. In the course of two or three weeks I could walk about pretty comfortably. From that time to May, 1850, I never wore a bandage, nor paid any particular attention to the seat of my former lameness.

In June I became worse, and my professional duties were performed with more inconvenience. I called on Sir Benjamin Brodie, and had his opinion. At that time the pain was strictly localized, but there was still some degree of boggy swelling; the skin was pale and cool. Sir Benjamin recommended bandaging with Vulcanized adhesive strapping, to encircle the lower part of the limb. This plan, on being pursued, was evidently unsuited to my case, as the heat, pain, and swelling increased. When Sir Benjamin saw me again, he ordered the entire removal of the elastic bandages, and the immediate application of a dozen leeches, to be followed up with fomentations, and afterwards cold lotions and a general antiphlogistic regimen. I remained for several days in bed, and for two or three weeks gave entire rest to the limb. This mode of procedure afforded considerable relief, and I thought I might now venture to resume my duties; but no sooner did I stir about than the described symptoms returned, with pain from the ankle to the groin. Leeches, antiphlogistic measures, and rest, were again employed, and, as on other occasions, with benefit. Several of my medical friends kindly called to see me, but unfortunately for the cure, all their opinions varied. Not being fully convinced—so far as medical consultations are concerned—that in a multitude of counsellors there is wisdom, I resolved to place myself under the care of one gentleman, to rigidly obey his injunctions, and abide by the result. Consequently I called on Mr. Travers, whose European reputation and long practical experience were a guarantee for whatever he suggested. Mr. Travers said he had known cases of an analogous nature, where inflammation of the muscles had been produced at that part, in sportsmen and others who were accustomed to be many hours on horseback; and he instanced two cases, where, from pressure against the saddle, not only inflammation, but suppuration, had been the consequence. He conceived that, from a sudden twist, there might have been a slight laceration, and, finally, a small secretion of matter in the deep muscles. The swelling and pain having abated, Mr. Travers advised a mercurial plaster and moderately applied bandaging. In the latter end of August I was so far improved that I was enabled to go to Yorkshire for change of air, and I remained three weeks. On my return my health was quite restored, yet still the induration spoken of, and the pain in walking, were not removed.

In the middle of October I was suddenly summoned to a lady in a fit. Her house was only two or three hundred yards from my own residence, but in the hurry I had, I felt, done mischief to the peccant part. On the following morning it was evident, both from increased sensibility and ocular inspection, that my troubles were about to return. I could not walk a hundred yards without pain. Mr. Travers now recommended blisters, which were applied to the third repetition. I desisted from all exertion, and sought once more, if possible, to be rid of so troublesome an affection. All the remedies which now, during four months, had been tried, had, it was too evident, been tried in vain; and on the 10th of November I found myself again in bed, not one whit better than I had been in July. On the 18th of November, Mr. Travers again examined me, and very correctly observed, that as all the ordinary

means had been adopted which an affection like the one under consideration appeared to demand, the only alternative remaining was to cut down and see that which was difficult otherwise to understand. To this proposition I cheerfully agreed. The 22d was proposed as the day for operation, and until that time I was to constantly keep it poulticed. Mr. Travers, Mr. Benjamin Travers, and Dr. Samuel Edwards, met for the purpose of making an incision into the part. Mr. Benjamin Travers cut down from an inch and a half to two inches, and then carefully dissected the deeper strata of muscles. On scratch-open with the point of the scalpel an evidently distended bursa, a couple of drachms of slate-pencil-colored fluid welled from below. It was the opinion of the gentlemen present that this fluid, by being bound down by the deep fascia, would be sufficient to give rise to irritation of the periosteal covering of the femur, and inflame the adjacent white textures. On noticing the deep muscular tissue, it looked dark and congested, of a dirtyish-red color, evidencing the hue observed in chronic myelitis. The orifice was kept patulous by means of lint and poultices continually applied. After the operation the pain was somewhat less, but by the 6th of December the whole of the fascia lata of the thigh was inflamed. The wound now not looking so healthy as could be wished, Mr. Travers applied the caustic pretty freely; and as the pulse was soft and inclined to be quick, he prescribed quinine, a generous diet, and two or three glasses of port wine daily. After this, a teasing cough came on; I had also copious night-sweats, and considerable debility was apparent. The pulse was soft, and now (December 15th), 120. The pain in the limb after this increased; the discharge was very considerable, the appetite impaired, and it was with difficulty that I could get out of bed without assistance. Dr. Edwards examined my chest, but the physical signs were not such as to give rise to any great anxiety. There was some degree of hypervascular murmur, but as the percussion and other conditions were unaltered, Dr. Edwards rightly attached little importance to the increased respiratory murmur. The emaciation and general excitability were sufficient to account for it. After this (December 22), the mere exertion of coming down stairs to lie on the sofa was attended with such difficulty as to wellnigh produce syncope. The cough continued incessantly; the night-sweats were as before, and the pulse ranged from 115 to 120. I now remained entirely in bed.

Mr. Travers had become anxious as to the result. The whole of the inner condyle was so tender as to render the slightest touch painful, and every day rendered the emaciation more obvious. In that true spirit of kindness and interested concern which Mr. Travers had manifested from the first of his assiduous attention, he strenuously advised the total relinquishment of my practice, and recommended quiet lodgings at Brighton. With reluctance I consented to this proposition, and as soon as circumstances would permit, made my arrangements for departure, in the hope that change of air would do more than physic. When my servant was dressing the wound on the morning of the 8th of January, 1851, he observed a small dark point, emerging—not from the orifice of the wound—but several lines to one side of it, through the healthy skin. When he had drawn my attention to it, I placed my finger upon it, and was surprised to feel a hard sharp body. I desired him to reach a pair of forceps, and to my utter consternation I withdrew a huge piece of hard *black thorn*, measuring exactly an inch and a half long. The bark had been absorbed, but in other respects the ligneous structure was unaltered. It soon occurred to me that it must have penetrated the thigh in October, 1845, when my horse fell in leaping the hedge, as I cannot call to remembrance any other time when such an accident could have occurred.

CASE II. *Extraordinary impaction of the head of a large screw in the right wrist-joint; removal; useful hand.* Lancet, 1851.

Those who have carefully dissected the wrist-joint, and have followed, with the scalpel, the closely-set and waving line of the eight little bones forming the carpus, remember full well how tightly these bones are bound together, and how difficult it is even with a sharp instrument, to separate their connections. They will easily conceive that this joint may be crushed or fractured by a weighty body or great violence, but they will with difficulty believe that the head of a screw, more than one inch and a half square, may be thrust between the carpal bones, so as to be completely imbedded and hidden, either between the rows, or between the upper row and the articular extremity of the radius.

Indeed, we venture to say that the screw, of which we give an engraving, might be placed in the Pathological Museum of the Royal College of Surgeons of England, by the side of the celebrated shaft which was forced through the chest of Mr. Thomas Tipple, in the year 1812, and the iron pivot which passed obliquely through the body of the German sailor, in 1831.

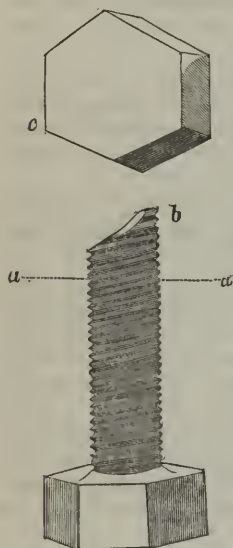
It will be remembered that Mr. Tipple, under the care of Mr. Maiden and Sir W. Blizard, made a good recovery, and died eleven years after the accident; the sailor likewise recovered, and is probably alive at the present moment. We are aware that in the present case life was not so miraculously saved as in the above two instances, but the nature of the accident deserves to be recorded, as it is not likely ever to occur again, and since the possibility of its happening might *a priori* have very properly been doubted. We are indebted to Mr. Brushfield, house-surgeon to the hospital, both for the details of the case, and the drawing from which the engraving is taken.

William M ———, aged thirty-seven, a lucifer-splint cutter, residing in Stepney, was admitted into the London Hospital under the care of Mr. Curling, on the morning of May 6th, 1851, on account of a large screw, with an hexagonal head, being impacted in the right wrist-joint. The history he gave of his accident was as follows:—

The knife used in cutting the splints was driven by a steam-engine of eight horse power, and worked horizontally backwards and forwards in a fixed frame, there being two screws at the posterior part to regulate its motion. At the time of the accident, his right hand was resting upon the frame, and without his being aware of it, the machinery was set in motion; as the knife moved backwards, his hand became fixed between the frame and one of the regulating screws, and the motion being still continued, the head of the latter was forced into the joint, and became firmly fixed there, the sensation at the time being that of a dead weight upon the part. His hand accompanied the knife in its motions until the machinery was stopped, and then, after some difficulty, the screw was filed through, the major part being left in the limb. He was placed in a cab, and brought to the hospital immediately.

The limb was supinated. On the dorsal surface of the wrist-joint, and opposite to the metacarpal bone of the index finger, about half an inch of the screw presented itself above the level of the surrounding skin: let it be well understood that the hexagonal part was stuck in the wrist, and that only half an inch of the circular part was projecting from the surface. When laid hold of and the hand partly flexed, it could be slightly moved, but when extension took place, it was quite immovable. The skin on the ulnar side was slightly lacerated, but on the radial it was inverted, and embraced the foreign body so tightly, that the smallest probe could not be passed between the two. Around the wound was a small oozing of blood, mixed with synovia.

By means of a scalpel the wound was dilated in either direction, and after some time, and no small amount of force, the foreign body was extracted, a discharge of synovial fluid following this release. During the period of the extraction, the patient was faint, and felt very sick, but immediately afterwards he expressed himself as being in a state of comparative ease. Some small fragments of bone were removed, but there was no bleeding. The limb was placed on a straight splint, and the wound dressed with strips of wet lint. The following is a representation of the screw, exactly of the natural size, *a a* to *b* being the portion above the level of the skin, and *c* the



irregular hexagonal head, which had been completely impacted in the joint. Thirty drops of laudanum were administered; the patient slept very comfortably during the evening and early part of the night. On the following day he was very feverish, and continued so for nearly a week, by which time a large quantity of pus began to flow from the wound daily. A linseed-meal poultice was then applied in the place of the wet lint. The lower part of the forearm then began to swell and inflame; and as soon as fluctuation could be detected, Mr. Curling made an opening, which measure was followed by the exit of purulent matter.

Inflammation, occasionally reaching to the arm, continued to recur at irregular intervals for five weeks, during which period several abscesses formed around the joint and were opened. On June 8th (about five weeks after admission) great swelling and redness of the parts around the primary wound had taken place, and the pus, which had hitherto flowed freely, was scanty in quantity, and of a different color from that discharged from the other openings. A probe was carefully inserted between

the edges of the wound, and some obstruction was distinctly felt about half an inch below the surface of the skin; a fine pair of dressing-forceps was then used to extract the foreign body, which proved to be a small portion (about three-quarters of an inch square) of the woollen coat, carried into the joint at the time of the accident.

The next day a large piece of loose bone presented itself on the anterior surface of the joint: it was cut down upon and extracted, the patient experiencing great relief from its removal. From this time the openings of all the abscesses, four or five in number, gradually closed, and the original wound occasionally discharged small fragments of bone previous to its perfect closure.

The patient was discharged on August 7, three months after admission, and ordered to attend as an out-patient. He was then able to move his fingers without giving himself the slightest pain, and all swelling had subsided.

It is very remarkable that the head of the screw, impelled by the force of the engine, did not crush and fracture the bones entering into the wrist-joint, but that these in some degree gave way and receded before the compressing action of so blunt a body as the large head of a screw.

CASE III. *A steel fork extracted from the back.* By David Burnes, M. D., Surgeon, Royal Navy. *Lancet*, 1837, vol. xxxiii.

Robert Sims, aged 23, was entered on the sick list of H. M. ship *Belvidera*, about the middle of June, 1831, complaining of pain at the inferior angle of the right scapula, close to the base of which was a small phlegmon, as I then considered it, in the early stage of suppuration. On the 19th of June I opened the "boil," and ordered poultices to be applied, thinking it would heal kindly in a few days. On the 23d, however, on probing the wound, I felt what I at first thought was the edge of the scapula, but, on more minute examination, something black and shining was seen in the wound. On the 24th, it being evident that there was some foreign body in the wound, the opening was enlarged directly upwards, and a piece of steel, about the thickness of a common ramrod, presented itself, but resisted strongly any efforts to extract it. Being unwilling to put him to further pain, while there was a chance of its coming away by poulticing, and pulling it with the forceps daily, this gentler course was agreed on in preference to making a further enlargement of the wound. Being questioned as to the nature of the piece of steel, he expressed himself as much astonished as we were at its presence, and said he should not have known it had we not told him, and had he not felt pain from our pulling it with the forceps. He had never been in action, having been only two years in the king's service, nor did he recollect having received any wound by which anything of the kind could have been introduced. About two inches below the opening made on the 19th, we observed a small white speck, or mark, rather resembling the mark left many years after vaccination, than a cicatrix of a wound. This was the only vestige of anything like a wound that we could detect in his back.

July 2. The poulticing has been continued, and there is now a free discharge from the wound; the steel has been pulled daily by the forceps, and admits now of further motion, especially laterally, but is yet forcibly retained at its upper part; its direction is nearly parallel with the base of the scapula, close to which it lies, and in its course upwards it seems to incline deep into the substance of the muscles. About an inch of it can be seen when the integuments are retracted. He is averse to further measures; has no pain, except from the use of the forceps. Continue the poultices.

16th. Though the poulticing has been continued, and the steel pulled daily, there is no material alteration since last report, further than that the steel may be moved more freely in every direction, except when pulled directly downwards, when it seems to be retained as forcibly as *at first*; the probe can be introduced into the wound, upwards and inwards, nearly four inches, and can with some difficulty be made to move round the steel; but no information as to its size or shape can be gained from this mode of examination. It occurred to me, at this time, that it was a hook, and that it might be retained by catching on one of the ribs. Having no pain except from the pulling, and being still averse to the use of the knife, the same treatment was pursued.

Aug. 5. The foreign body having become very little loosened, and now causing more pain on its being moved, I made a deep incision of about three inches in length over its course upwards, using it as a director, when it was easily extracted, and found to be a common kitchen fork, broken off close to its handle, and with one of its *two* prongs wanting about an inch from its point; it was blackened, and, in some degree, rusted. It seemed to have been retained by a bridle of muscular fibres embracing its shoulders, for it was immediately liberated when the part was divided by the knife.

The wound was dressed simply, and healed so soon that in ten days the man was doing duty in the boats and aloft.

Strange as it may seem, even after its extraction, the man persisted in adhering to his original statement of his being ignorant how and when it had been introduced; and during the two months I remained in the ship I was not able to gain further information in the matter.

He seemed to have no defect of memory in any way, for he, without hesitation, gave me every information I asked as to his former life and habits. He is a native of Topsham, Devonshire, has been at sea since he was twelve years of age, and in the merchant service till two years ago, when he joined H. M. ship *Tweed*, at the Isle of France, and from which ship he was paid off immediately before joining the *Belvidera* in February last.

Setting aside his own statement altogether, my own opinion is, that it must have been in his back for many *months*, if not for *years*, judging from the indistinct and ill-defined mark left, *taking it for granted* that this was the wound by which it had been introduced, but which is yet problematical, from the little pain he experienced from its presence; and more especially from the knowledge that, during the previous *months* while he belonged to the *Belvidera*, he was never one day off his duty or on the sick list. Your readers are, however, as well able as myself now to form conjectures on the subject.

Having already experienced a difficulty in convincing some sceptical individuals of the facts above related, I may in justice to your readers and myself, state that, as the case excited great interest, *while under treatment the patient was seen* by the Hon. Capt. Dundas, Dr. Tweeddale, and most of the officers and crew of the ship, and also by Mr. Geddes, Mr. Chartres, and Dr. Jones, surgeons, Royal Navy; and the fork was extracted in the presence of Dr. Tweeddale, who assisted me, Mr. Yates, and others.

Appendix.—The patient continued to serve in the *Belvidera* till December, 1833, when he joined H.M. ship *Blonde*, going to South America. Being anxious to trace his future history, in the hope of obtaining some clue as to the introduction of the fork, I was enabled, through the kindness of Sir William Burnett, the Physician-General of the Navy, on the arrival of the *Blonde*, at Portsmouth, about a month ago, to communicate with him by letter. The result was, that he came up to London, and, on the 8th of November, called upon me to show himself. He then stated that, about eighteen months ago, while washing himself, he felt a small, hard body on the *left* side of the neck, which he was inclined to believe was part of the fork. On examining the part I had no doubt myself of its being the portion of the broken prong, and which I asked permission to extract. He readily assented; but, before the operation, I submitted him to the inspection of Sir William Burnett, Sir Astley Cooper, Sir Stephen Hammick, Mr. Liston, and other gentlemen, who corroborated my opinion as to its being a portion of the fork, and recommended its extraction. On the 20th, in the presence of Mr. C. Smith, surgeon, I made an incision over it (its position being just behind the middle part of the posterior edge of the sterno-cleido mastoideus muscle, where it is crossed by the external jugular vein), when it was easily removed, and proved to be the prong, which had the same bronzed appearance as the fork itself, and was coated with rust at its fractured end. It does not exactly join with the fork, and I am inclined to think some very minute splinters may have been broken from it when fractured, or some chemical action, while in the body, may have corroded it.

It is singular that he had never suffered pain from it, although it has crossed from the *right* side of the back to the *left* side of the neck. I was

only induced to extract it from its superficial position, and the singularity of the history, yet it is possible it might, in time, have advanced still further, and have injured the carotid artery or trachea.

Though cross-questioned by all who saw him, he still repeats his former story of being innocent as to the introduction of the fork. As he felt little inconvenience from my incision, he has left town with the intention of joining H. M ship *President*, for another three years' cruise, and, from what I know of him, I am convinced my *steel-backed* friend will do credit to the wooden walls of Old England.

"The persevering manner in which Dr. Burnes has followed up this interesting case is praiseworthy, and does credit to his professional industry."—
ED. L.

CASE IV. *One hundred and thirty-two needles extracted from the person of a young lady.* Iowa Medical Journal, 1853.

The particulars of the rather interesting and somewhat perplexing "needle case" here, are substantially as follows: About the 1st of May, Miss Mary H., æt. nineteen, accidentally and at different times plunged two needles into her arm, which I extracted. About a week afterwards she came to my office with her arm enormously swollen. I examined it without being able to discern the cause. She came the third time, May 22d, when four needles were detected at the upper edge of the swelling, very deep in the flesh, which I was obliged to cut, before getting them. 25th. Four were taken. 29th. Fourteen were found; some of these worked up to the shoulder. 30th. Seventeen. 31st. Took one from the arm, and five from the left breast. I found needles from time to time till some time in July, amounting in all to 132—from a small cambric up to a large sized darning-needle. Some of them were very rusty, and others quite black; some lay very deep under the muscles, so that it was necessary to cut to the bone to get them, while others were so near the surface that but a slight incision was necessary. Nearly all were taken from separate places. Thirty-five were found in the left breast (if I remember correctly), thirteen in the right breast, four in the left side, the rest in the left arm and shoulder.

Every suggestion that imagination and credulity could invent has been circulated, as to the cause of this really singular phenomenon. It is supposed by some, that after getting in the first, she became so excited that she put the rest of them in herself, in a state of somnambulism. She is a respectable young lady, of a respectable family, and affirms that she "certainly knows nothing about it." The family had a large box of needles, whence she may have derived her supply.

After the first forty or fifty were removed, it was evident from the appearance of the needles that they were placed there at intervals, a few at a time. The inflammation at one time was so great, it was feared she would lose her arm. It is well now, with the exception of being weak and somewhat crooked. These are the facts as far as I recollect. It would be a great satisfaction to know exactly how the needles came there.

CASE V. *Sixteen needles and four pins extracted from the wrist.* Medical Examiner, 1845.

PROFESSOR HUSTON :—

Sir : In compliance with your request, I submit to you the following statement of the very interesting case of which I spoke to you some days since.

About the 21st or 22d of September last, I was called to see a young lady,

Miss P—, with her hand and wrist much swollen and inflamed, and very painful and stiff, in consequence, as she supposed, of a sprain. The pain was of the acute lancinating kind, and was much increased by the least attempt to move or bend the wrist. She was ordered to keep it perfectly at rest and apply evaporating lotions.

Sunday, Sept. 29, called again, and found the hand and wrist of nearly normal appearance, but she was not able to bend the joint without violent pain, extending up the whole length of the arm. On examination, I discovered on the back of the wrist, a short distance below the extremities of the radius and ulna, and near the middle of the wrist, just under the skin, some foreign body, apparently confined between the bones. Supposing from her account that it must be a small spiculum of bone, I made an incision directly over the body, and having by a probe ascertained its exact position, I introduced a small pair of forceps, and to my great surprise extracted three pieces of needles. During the ensuing week, at different times I extracted other pieces, in all, eleven whole needles and four pins without heads. Since that time, my father, Dr. Gordon P. Spencer, has extracted and sent to me two others. In all, sixteen needles and four pins have been extracted—three of the needles were broken into numerous pieces, all were much corroded, and most of them considerably bent. How these bodies came there, it is impossible to say, but from the manner in which they were confined, the depth from which they were taken, and the whole appearance of the parts, as well as of the needles, it seems impossible that she could have voluntarily introduced any one that was extracted. Some were found as much as two inches above the incision, lying directly between the bones. In conclusion, I would state that nearly all of these pins and needles were removed in the presence of some of our most respectable citizens, and that they are all now deposited in the museum of the Jefferson Medical College of Philadelphia.

Philadelphia, Feb. 12, 1845.

H. GORDON P. SPENCER.

Notwithstanding the difficulties mentioned by our young correspondent, without intending to impeach the character of the young lady for morality, we are nevertheless of opinion that she did voluntarily introduce all the pins and needles that were taken from her wrist. How else could they get there? Strange aberrations of mind occasionally occur, especially in hysterical females, under the influence of which they are guilty of acts greatly at variance with their general character.

CASE VI. *Two hundred and seventy-three needles extracted from the flesh.* Medical Examiner, 1845.

In the *London Medical Intelligencer*, of Nov., 1822, we have a notice of a case published in the *Medical and Physical Journal*, by Dr. C. Otto, of Copenhagen, of "a dreadful case of hysteria, which for several years appeared under the most varied and violent forms, such as stupor, delirium, dreadful cramps, tetanus, fever, vomiting of blood, etc. At last a tumor was perceived on the abdomen, which was opened, and a common needle was extracted. A second appeared in the loins, and another needle was found; in short, between Feb., 1819, and August, 1820, *two hundred and seventy-three needles were extracted*; 39 of them being from the left lumbar region, 22 from the left breast, 41 from the epigastrium, etc. Whenever a needle was near the skin, the most acute pain, fever, hiccough, and vomiting of blood, were excited; in the intervals, however, the girl was quiet; indeed, during the fifteen years, which this case has occupied, the patient has been occasionally in perfect health, and no needles have been extracted for more than two years."

CASE VII. *Mania for thrusting needles into the flesh; about fifty removed.* Lancet, 1850.

The patient is an unmarried woman, about thirty-six years of age; she was born in the country, and her family is decidedly consumptive. She has had the smallpox, and was treated, about seven years ago, in St. Bartholomew's Hospital, for a liver complaint. One year after this attack, the patient lost her father; she was very much shocked at this occurrence, and this mental disturbance, connected with certain ill-treatment which she met with, brought on insanity. She, however, recovered the use of her faculties in a short time, now began to complain of cough, and was admitted, about four years ago, into the Norwich Hospital. For the last five years some kind-hearted ladies took interest in her (hysterical patients are extremely fond of attracting attention and sympathy), and sent her to King's College Hospital, where she was admitted Sept. 10, 1850.

The patient, when questioned about her ailments, complained of pain at the pit of the stomach, after the ingestion of food, and of fits of vomiting, which distressed her much. She had cough; dry and foul tongue; no appetite; the urine was acid, and the menstruation scanty. When Dr. Budd made pressure on the pit of the stomach, where the pain was referred to, he felt hard and resisting bodies, which gave the hand the sensation of heads of needles, and, the part being carefully inspected, little white scars were perceived scattered about in the region of the serobiculus cordis. In order to ascertain the nature of the foreign bodies lodged under the skin in that region, several incisions were made exactly over them, and on the day after admission, four needles were removed from under the integuments. On the third day, ten needles were likewise extracted, and it was noticed that the vomiting ceased after the removal of these foreign bodies. The patient continued, however, to complain of pain in the epigastrium, for which she had aperients and anodynes, and about ten days after her reception in the hospital, twelve more needles, with some fragments, were taken out. It was now noticed that they were not all needles; some looked like pins, the heads of which had been broken off.

Dr. Budd considered that the needles placed in such an unusual locality must have had much influence on the pain the patient had felt about the stomach, and that that organ, when in a state of distention, might easily have been transfixed by the points of some of the needles. It was now a point of some interest to ascertain how these foreign bodies had found their way into the patient's subcutaneous areolar tissue. It required much persuasion, and even threatening, to make her give any explanations on the subject, but she confessed at last, that she had thrust the needles under the skin five years ago, in a fit of insanity, adding that they were all pushed in at the same time. Dr. Budd did not give credit to this tale, and, considering that the needles were all oxydized and had no eyes, he was of opinion that they had been thrust in successively; that, in fact, the woman had placed them there every time she had done with them, this being, doubtless, a very extraordinary fit of economy.

Whether such acts may be committed under the mere influence of hysteria is certainly open to doubt. Dr. Budd stated, in some clinical remarks which he made on the subject, that such cases happen in general when mania is present, and mentioned a preparation now in the museum of the College of Surgeons, exhibiting an example of the same kind as that offered by his patient, where no less than 100 needles were thrust in pretty well in an analogous manner. In Dr. Budd's case, however, about fifty needles were found; they were shown to the pupils during the lecture, placed in rows on a piece of flannel,

and their great number could hardly be looked at without a feeling of amazement at the strange occurrence. Dr. Budd stated that he had no faith in the accounts we hear of needles or pins having been swallowed, and then reappearing under the skin in some distant part of the body; he fully believed that such objects were generally thrust in at the very spot where they were subsequently found, exactly as happened in the present case. He considered it as quite impossible that a pin or needle should take the circuitous route which it was sometimes alleged it had travelled, but that such accounts should be received with great caution. We may just mention here, that in the Registrar-General's Report for the week ending October 12, 1850, the widow of a tailor is mentioned as having died of paralysis at the age of sixty-three. On a post-mortem examination, a needle was found in the capsule of the kidney. Now, we need hardly point out how likely it is that the needle entered by the loins, and lodged in the organ where it was found. Dr. Budd's patient is doing well, and she is very likely, now that she has been freed from these strange guests, to recover her health, under an appropriate tonic treatment.

CASE VIII. *A needle travelling.* *Lancet*, 1855.

A tailor called upon me on the evening of the 5th of May, 1855, complaining of a pricking sensation just above the inner condyle of the left humerus. He stated that, about a fortnight previously, whilst playing rather roughly with his fellow-workmen, a full-sized needle was thrust into his left shoulder. He had no doubt, whatever, of its having entered just below the acromion process, but the pain so quickly and entirely ceased that he fancied the needle must have pushed itself out again without his knowledge. He was confirmed in this opinion by the fact that he never experienced the least uneasiness until the evening previous to that on which he called on me. Upon examining the arm at the spot where he described the pricking sensation to be situated, I found a distinct pointing under the skin, which was beginning to assume an erysipelatous blush, just above the inner condyle of the humerus. There could be no doubt about the foreign body being imbedded in this locality. I immediately cut down upon it, and extracted a full-sized tailor's needle, in a state of entirety.

The peculiarities of this case would seem to be the distance which the needle traversed in the short space of fourteen days, and the spiral course which it must have pursued. It is probable that it passed inwards and backwards behind the humerus, and by the action of the arm, had been worked forwards so speedily to the point at which I discovered it. It lay, moreover, at right angles with the bone.

Detection of needles in the flesh by magnetism. By James H. Aveling, Esq., Surgeon, of Aberdeen, Scotland. *Lancet*, 1851.

It has long been an established principle in the practice of surgery, when needles have become imbedded in the living tissues, not to make any exploratory incisions in search of them, but to wait until their presence can be distinctly felt, either by the probe, or by the finger of the surgeon. This expectant mode of treatment, while it was the most judicious that could be adopted, so long as the exact situation of the foreign body was indicated only by the vague and indefinite, though sufficiently painful and distressing sensations of the patient, may, I think, be considerably curtailed in its duration; and when the intruding body is at all near the surface, it can, I believe, be completely dispensed with, by the following simple method: A needle is to be magnetized, by drawing a magnet along its surface about fifty times; it is then to

be suspended by a fibre of silk attached by a piece of sealing-wax to the centre of the needle, so that neither the eye nor point may dip more than the other. This suspended magnet should then be held over the suspected part, which should be shaved if very hairy; when this magnetic indicator arrives over the part, the needle will dip and adhere to the skin, showing the exact point under which the body lies.

In two cases in which this mode of detection has been tried, the portion of needle sought for has been discovered and extracted, one of the needles having remained imbedded for three months.

SECTION II.

REMARKABLE WOUNDS AND INJURIES.

CASE I. Cheselden's celebrated case of a miller having his arm, with the scapula, torn from his body; recovery. Cooper's Surgical Dictionary by Reese.

In the *Phil. Trans.* Cheselden has recorded a very remarkable case, in which a man's arm was suddenly torn from his body. Samuel Wood, a miller, had round his arm a rope, which got entangled with the wheel of the mill. He was lifted off the ground, and then stopped by a beam, which prevented his trunk from passing further; at this instant the wheel, which was moving with immense force, completely tore and carried away his arm and scapula from his body. The appearance of a wound occasioned in this manner must of course be horrible, and the first idea thence arising must naturally be that the patient cannot possibly survive. Samuel Wood, however, escaped with his life. The limb had been torn off with such velocity that he was unaware of the accident till he saw his arm moving round on the wheel. He immediately descended by a narrow ladder from the mill, and even walked some paces, with a view of seeking assistance. He now fell down from weakness. The persons who first came to his assistance, covered the wound with powdered sugar. A surgeon, who afterwards arrived, observing that there was no hemorrhage, was content with bringing down the skin, which was very loose, so as to make it cover the surface of the wound. For this purpose, he used two cross-stitches. The patient was conveyed the next day to St. Thomas's Hospital, and put under the care of Mr. Fern. This practitioner employed the usual means for preventing the bad symptoms most to be expected in this sort of case. The first dressings came away without any bleeding; no alarming consequences ensued; and the patient in two months completely recovered.

When the arm was examined, it was found that the muscles inserted into the scapula were torn through near their insertions; while other muscles, arising from this bone, were carried away with it. The skin covering the scapula had remained in its natural situation, and seemed as if it had been divided precisely at the insertion of the deltoid muscle.

CASE II. Arm and scapula torn off without fatal consequences. By John Braithwaite. London Med. Gazette, 1833.

Peter Naidin, aged twelve years, subject to epilepsy, and of a scrofulous habit, whilst working at a carding machine, fell, it is supposed in a fit, and was caught by the right arm in a revolving strap, which carried him up to the ceiling, and tore off the arm and scapula. When seen, about half an hour after the accident, he was pale and faint, but there had not been a very profuse hemorrhage. The axillary plexus of nerves had been pulled out, and hung loose from the detached limb, to the length of two or three inches. The artery was seen pulsating at the bottom of the wound, and was plugged up by a coagulum of blood. The vein was distended, and lay upon the torn muscles

like a gorged leech. The integuments presented an appearance as if divided by a sharp cutting instrument, and formed a semilunar flap from above. In attempting to pass a ligature round the vessel it slipped from the grasp, and a violent gush of blood ensued; but it was immediately seized by a tenaculum, and the hemorrhage restrained by the application of a single strong silk thread. A ligature was also applied to the vein, and a small artery was likewise tied. The flap was carefully adjusted, and secured by two ligatures, and plaster strips and pledgets of carded cotton were laid over the whole, and retained by a broad roller, which bound down the clavicle, and prevented it from putting the skin upon the stretch. A little brandy and water was given, the boy was sent home to bed, and a draught, with gtt. xxv. tr. opii, was administered. No unfavorable symptoms followed, the boy only complained of slight sickness, and of soreness, as if from bruises. It would be superfluous to state the progress of the symptoms and of the treatment; it will be sufficient to add, that the wound was first dressed on the 16th instant, and a healthy purulent discharge was established on the 18th. The ligatures came away on the 3d of August, but a large cavity over the site of the scapula continued to discharge very freely. A seton was passed through this to excite the growth of granulations, without effect, but adhesion of the entire flap was subsequently accomplished by injecting a solution of alum, of the strength of a drachm to the half-pint. The boy is now perfectly well, and suffers no inconvenience from the scapular end of the clavicle, which does not project so much as to endanger the safety of the skin.

CASE III. *Forcible separation of the entire arm from the body; recovery.* By S. F. Scarnell, of Essex, England. *Lancet*, 1832, vol. xxii.

March 17. George Dawson, of Great Clacton, ætat. 13, was in the upper story of a mill, and whilst a sac of meal was being drawn up, incautiously took hold of the chain; his hand was immediately carried over the tiller, and his person lifted about two feet. There not being a space of more than four inches between the tiller and the roof of the mill, the arm was plucked off, and the body fell.

Upon viewing the part, it presented a horrible appearance; the ribs were exposed to a considerable extent; the scapula, with all its muscles, was drawn out, leaving behind only the cartilaginous margin, which had separated from its base; the latissimus dorsi, and pectoralis major and minor, were torn asunder about two or more inches from their insertion into the humerus; the deltoid and other muscles were entirely torn away, leaving the clavicle exposed as far as the deltoid had its origin. I removed this portion of the clavicle, which projected like a finger, and, after securing the vessels, covered it with such portion of the integuments as remained, and applied light dressings. The wound is now nearly healed. The only part which sloughed was the portion of integument which covered the top of the shoulder, and consequently sustained a severe bruise between it and the tiller of the mill. His general health suffered very little; he was able to walk out at the end of a fortnight, and on the third Sunday went to church.

CASE IV. *A grape-shot passing through the pelvis; patient recovered.* Chelius's Surgery by South, vol. i.

Colonel A., whilst in action before Alexandria, March 21, 1801, received a grape-shot through the right ischiatic notch, which, taking a circuitous route, passed through the pelvis without wounding any large vessel or nerve, came out under Poupart's ligament on the left side, and was found in his pantaloons. In its passage the ball had wounded both the rectum and bladder.

The Colonel was removed from the Desert, on board the *Trusty*, under the care of Mr. Este, who found him sinking very fast. He, however, constantly applied poultices, as hot as could be borne, and gave him bark, camphor, ammonia, etc., with brandy and bottled porter, by which latter he was much refreshed. The physician-general, etc. etc., were called in consultation, who agreed that a recovery was impossible. The wound being gangrenous, discharged extremely, and was intolerably offensive. The feces and urine passed through the lower wound, but there was no natural evacuation by the rectum or urethra. After some few days a favorable change in the wounds commenced; the sloughs separated, healthy pus was discharged, granulations were produced, and the wounds healed. The feces at length, and also the urine, passed by their natural channels. When able to use crutches, he was sent in a convalescent state to Malta. Stricture of the rectum ensued, of which he was cured by Sir A. Cooper, and some of the gold lace of his uniform came away.

CASE V. *A bullet shot through the bladder and womb; patient well in three weeks.* Dr. Palmer, of the East India Company's service. Boston Med. and Surg. Journal, 1853.

Dr. Palmer, of the East India Company's service, recently arrived in Boston from Calcutta. He was surgeon in the Burmese war still raging, and was at the taking of the great city of Prome by the British, last autumn. Dr. P. stated a curious fact, the other day, illustrative of the recuperative powers of those people. Like the Chinese, they seem to recover from wounds that would be fatal to almost any other race of men. A married woman with one child, being upon her hands and knees while crawling under the awning of a boat, was shot with a ball which entered her body about an inch from the right side of the anus. In about half an hour after, the ball was discovered on the right side of the navel, imbedded in the loose structure, and after some difficulty was extracted. In its course it had penetrated both the bladder and uterus. A bloody discharge, mixed with urine, flowed freely from the wound for three or four days, when it ceased altogether. Little or no inflammation ensued, no antiphlogistic measures were adopted, and although the unfortunate patient suffered violent pains for the first two days, Dr. Palmer kept her quiet with chloroform, and in three weeks she was restored to perfect health.

CASE VI. *A ball in the hip thirteen months; epilepsy; its extraction cured the patient.* By C. Kimball, M. D., Prof. of Surgery in the Berkshire Medical Institute. Boston Medical and Surgical Journal, 1849.

George Church, a soldier of the Massachusetts Regiment during the late campaign in Mexico, was shot down in the battle of Molino del Rey, on the 28th of September, 1847. He was taken into Hospital the evening of the same day, and fell under the charge of one of the chief surgeons, Dr. Satterlee. It was found, upon examination, that a wound had been received in the hip—that a musket-ball had entered just anterior to the great trochanter, and made its way apparently upwards and forwards, towards the anterior superior spinous process of the ilium. Attempts were immediately made to extract it, but they were unsuccessful. The wound healed very slowly, and it was not till nearly the end of five months that he was able to leave the hospital. He then returned home to Massachusetts, and gradually became so far restored as to be able to engage moderately in the common duties of farming. In the course of a few months after this, some 10 months from the date of the wound, he was seized with a violent paroxysm of epilepsy. Three weeks after, he was seized with another, still more violent; and thus they

continued returning at intervals of every two or three weeks, till the latter part of October, 1848, when, at the suggestion of Dr. Guiteau, of Lee, his attending physician, he came to Pittsfield for the benefit of a surgical consultation. The result of this consultation, was the unanimous conclusion that the epilepsy had been induced by the wound in the hip—that a ball or some other foreign body, lodged there at the time the wound was received, was implicating some important nerve—and an operation, with the view of its dislodgment, afforded the most reasonable chance of relief. This operation, however, was not pressed with much earnestness. The efforts of the army-surgeon to the same end had proved abortive in the first instance; and the present circumstances of the case, certainly gave no very flattering assurance that a second attempt would be more successful. However, the proposition was readily embraced by the patient, and the operation accordingly performed on the 28th of October.

A fistulous opening, sufficient to admit a common-sized probe, indicated the original course of the wound, to the extent of some three inches, and in a direction as before stated, towards the anterior superior spinous process of the ilium. As a most critical examination of the part had hitherto afforded no idea of even the probable location of the ball, it was thought best to endeavor to reach it by tracing, if possible, this fistula through its entire course. A grooved probe was accordingly introduced, and pushed forwards till it came in contact with the surface of the ilium. Upon this, a straight bistoury was introduced to the same extent, and the fistula, thus far, laid freely open. Its further continuation and direction were now detected, though with difficulty, from its course having been so entirely changed. A long probe being introduced into this new branch of the fistula, it was made to pass some 8 inches backwards and downwards, making its way along the surface of the bone, just under the crest of the ilium, till it reached the ischiatic notch, when it fell directly upon the ball, which was situated, it would seem, very near to, if not in contact with the sciatic nerve. An attempt was now made to bring into service the ball-forceps, but the length, the narrowness, and unyielding callous walls of the fistula, rendered them quite useless. It seemed necessary, therefore, to lay open this passage still further, and it was accordingly done to the extent of some 5 inches. Again the forceps were introduced, the ball readily laid hold of, and a good deal of force applied; still it refused to yield. A bistoury was now passed into the bottom of the fistula, and the callous tissue immediately embracing the ball, carefully divided at several points, so that upon a third application of the forceps, it was brought away with comparatively little force.

This operation, undertaken with a good deal of reluctance, and, in view of the circumstances of the case, with serious misgivings as to its success, has been most satisfactory and gratifying in its results. From the day it was performed to the present time, there has been no return of epilepsy; and the patient's health, which had previously been most seriously impaired, has now become so far restored as to make it safe to pronounce him perfectly well.

CASE VII. *Most extensive gunshot wound of the face; recovery.* By George F. Cooper, M. D., of Americus, Georgia. *Southern Med. and Surg. Journal*, 1849.

Naney, a servant woman, æt. 40 years, received on the 30th of January of the present year a wound, by the accidental discharge of a shot-gun, charged with the largest sized shot. She was sitting within twelve feet of the young man who had the gun (a son of the owner of the slave), and must have re-

ceived the principal part of the load; her face must have been turned obliquely to the left of the young man, as the shot entered about the middle line of the face and passed out just anterior to the ear. The wound extended vertically from the internal canthus of the right eye, down through the upper lip; the soft parts included between a line drawn from immediately below the internal canthus to the tragus, and another drawn from the right angle of the mouth back to the angle of the inferior maxilla, were entirely destroyed, with the exception of the duct of Steno, which was entire, and lying loosely down upon the lower jaw, totally divested of all its attachments, back as far as the extent of the wound. It could be easily raised to its normal position, and was found to be of proper length; it of course came away with the detachment of other sloughs, and the saliva escapes now at an orifice within the oral cavity. The right naris was entirely destroyed back into the pharynx, the left opened for half of its course anteriorly; the right half of the hard palate was also destroyed; the whole of the masseter muscle was carried away, and the end of the temporal was cleanly detached from its point of insertion into the coronoid process. The whole body of the superior maxilla was mutilated and the quarter portion driven away, separated from its fellow along the palatine process, including the right palate bone, which was also separated from its opposing fellow, and rested upon the tongue, to the great annoyance of the patient. The orbitar plate of the superior maxilla was fractured into several pieces, causing the eye to fall much below its proper level. The injury in this region extended back to the bottom of the orbit. The alveolar processes of the left superior maxilla, including those of the incisors, were also fractured. The malar bone was distinct from all its angles—held in place, however, by the skin which partly covered it. The inferior maxilla was fractured just anterior to its angle. The point of the coronoid process was shot away—the body of this bone contiguous to its angle was denuded of its soft parts.

With this array of facts, one could readily imagine what remains to be said of the constitutional condition of our patient; especially when we consider the importance and vascularity of the parts involved, and their contiguity to the brain.

The second degree of concussion was present for some hours, but consciousness slowly returned; the nervous and vascular systems still remaining in an extreme lethargic condition; pulse, eight hours after the reception of the injury, was about 45 beats per minute and very feeble; the extremities were cool, etc. The amount of immediate hemorrhage will explain in part her prostration, it being probably more than is usually consequent upon wounds of this character. It was however of short duration, which circumstance, perhaps, was fortunate for her. On the morning of the 31st, her improvement was scarcely perceptible; the temperature of her body was rather more equable than the evening before. She now complains of considerable headache. I removed all the spiculæ of bone; cold water dressing was applied, and ordered to be kept up; a simple roller over the vertex and under the jaws, to support the inferior maxilla, and a compress over the seat of fracture, constituted the treatment. Apprehending if irritation should be at all violent, a recurrence of hemorrhage and almost inevitable inflammation of the brain from contiguity (for be it remembered the wound extended to the bottom of the orbit almost in contact with the base of the brain), I at no time ordered the administration of any stimuli to accelerate reaction.

Feb. 1. But little improvement, vital phenomena scarcely more active than the day before, which I regarded as decidedly favorable, for reasons stated above. I now entertained some fears of secondary hemorrhage upon the detachment of sloughs; treatment continued.

2d. Reaction exceedingly tardy; no further unfavorable indications; same treatment continued.

3d. Sloughs beginning to separate; suppuration in its incipency; no recurrence of hemorrhage. Ordered warm water dressing, and as a topical application, a dilution of Labarraque's Solution, for the correction of the fætor and its slightly stimulating effect; meal-gruel, chicken-water and wine-whey, allowed for nourishment; an enema ordered in the afternoon.

4th. Wound now granulating finely; every indication of terminating happily; treatment, same.

I did not, after this, in consequence of the distance, see her regularly; but obtained intelligence from her as often as was necessary. She gradually convalesced, and had entirely recovered when I last saw her, March 19th: she was still emaciated, yet enabled to walk about the house; the right eye, as before stated, which had fallen below its level, had been elevated to its proper height; vision, however, was very imperfect and the pupil preternaturally dilated.

The wound, in cicatrizing, had drawn the face somewhat to the right, and the great destruction of the soft parts was repaired to a considerable extent, leaving, however, a large opening in the cheek, which permits a protrusion of the tongue at every effort to speak, rendering articulation exceedingly indistinct. The lower jaw, to my surprise, has united.

I am induced to make this report, from the extent of the wound, the importance of the parts involved in it, and the agency of the *vis medicatrix nature* in bringing about a recovery.

CASE VIII. *A patient shot in the abdomen by a revolver, voiding the ball with his urine the third night afterwards; recovery.* By C. D. Stickney, M. D., of New Bedford, Massachusetts. Boston Med. and Surg. Journal, 1854.

On Wednesday, the 7th of June, 1854, Edwin James, of this city, a painter, was accidentally shot by a lad with one of Colt's revolvers. I was called to him soon after the accident occurred. I found him intensely excited, and with severe pain in his abdomen, where he had received the ball, which entered about three and one-half inches downwards and outwards from the umbilicus. Immediately after having received the injury, he voided a small quantity of urine, which was slightly tinged with blood. He soon expressed a desire to urinate again, but found himself unable. With my catheter I drew off about two ounces more. Saw him again in the evening. He was very thirsty; surface was moist and warm; pulse 98. The pain in the wounded parts equally severe, with some tenderness of the abdomen when pressed upon. Still unable to urinate spontaneously. Again drew off about the same quantity of urine, which did not contain any blood.

Thursday morning. Has passed a disturbed night; no quiet sleep. Has vomited several times; is very thirsty. Tongue dry and coated. Skin dry and hot. Pulse 110. Tenderness of abdomen has increased. Has passed urine several times, which was scanty in quantity, high-colored, and offensive. Saw him several times in course of the day. Has been delirious at times. No material change in symptoms in other respects.

Friday morning. Has had about two hours' refreshing sleep. Pain in abdomen now dull in character, instead of sharp and lancinating. Considerable tenderness of injured parts when pressed upon. Less thirst; surface dry, but not as hot as yesterday. Pulse 100. Tongue still dry and furred.

The treatment consisted mainly in keeping him as still as possible. In course of the night (Friday), feeling that he was quite out of harm's way, he insisted upon getting up; and in the presence of the one who had the care of him,

when in the act of urinating—the *bullet passed with the water into the vessel*, causing him but little suffering.

I have only detailed the symptoms, and intentionally omitted the treatment, with the belief that it would not add to the interesting features of the case. His unpleasant symptoms now commenced gradually to subside, and in a short time he was discharged as cured. I saw him, not long since, when he told me that he felt as well as ever, and was able to perform as much labor as before the misfortune happened. The friends of Mr. James, and indeed many of my brother physicians, were slow to believe that the ball could have passed him in this way. Dr. L. Bartlett, of this city, who saw him several times in consultation with me, I am sure will confirm the above-mentioned facts in the case.

CASE IX. Gunshot wounds—one through the pelvis, the other opening the trachea, œsophagus, etc.; patient recovered. By John Davis, M. D., of Abbeville C. H., South Carolina. Charleston Med. Journal and Review, 1853.

Below I send you the outline of a case that may be of some interest to you and your numerous readers, showing, as it does, that we should never give our patients up till they are dead.

On Monday evening, the 6th of December, 1852, at half-past seven o'clock, I was sent for, in haste, to see Maj. J. D. A., a large, muscular man, weighing two hundred and twenty pounds, aged fifty-six, who had just been wounded, at one of our hotels, by a pistol ball entering in front of the trachea, and about an inch above the upper end of the sternum.

I found him weltering in his blood, upon the floor of an adjoining room to the one in which the circumstance occurred, with a pulse of 130, quick, small, and irritable; cold extremities; countenance relaxed and pale, accompanied with a free escape of air from the wound, with a hissing noise, at almost every expiration. Upon examining the wound with Drs. Wardlaw and Lomax, we found a small, round orifice at the point designated, but were unable to ascertain what direction the ball had taken. The hemorrhage, which had been enormous—at least three quarts in the short space of twenty-five or thirty minutes—had entirely ceased. Being informed that the pistol had been fired twice in quick succession, we instituted a further examination, and found that another ball had entered just below and near the middle point of Poupart's ligament, on the left side, and passed out about three inches from the anus, on the same side, having a downward direction. From this wound there was but little hemorrhage, and but little notice was taken of it at the time.

An attempt was immediately made to close the wound in front of the trachea, and to prevent the escape of air, with the adhesive strips, but in vain. We then applied starch paste, thinly spread upon a cloth, to the upper portion of the chest, extending half round the neck up to the chin; and when the first became dry another was placed over it, till four layers were thus adjusted, which prevented, for the time, any further escape of air from the wound. A large anodyne was given, and the room kept quiet.

The case was watched, during the night, by myself and Dr. Lomax. We gave him nothing more than an occasional anodyne and a sup of cold water, which, previous to the application of the starch cloths, gushed out at the wound so soon as an attempt was made to swallow them.

7th. Pulse 125, weak and quick; surface and extremities still cool, pale, and relaxed, though dry; takes no nourishment; bowels costive; urinates without difficulty, and appears quite rational and composed, though exceedingly weak.

8th. More heat of surface; pulse 120, fuller and less irritable. At eleven

P. M., had three large operations from his bowels in the course of an hour, consisting of fecula and dark clotted blood. Though they were passed in bed, they prostrated him very much. Gave brandy and morphine, which, in a few hours, partially aroused the almost dormant energies of the system.

9th. Pulse 115; surface warmer, and his general condition decidedly improved. Removed the starch cloths, as they had become inconvenient, as well as offensive, and hiss comes the air again from the external orifice, though quite partially, and not oftener than at every fourth or fifth expiration; and which was now easily suppressed by the adhesive strips. This wound was not interfered with again till the 18th, when the dressing was removed, and the orifice found to have closed. The wound through the pelvis presented no very unfavorable appearances at any time, though it disgorged an immense quantity of thick, bloody matter during the first six or eight days. It healed in about twenty-five days.

From the ninth till the nineteenth, when our patient left town to go home, eight miles in the country, nothing worthy of notice occurred, more than that he gradually improved, and has now entirely regained his former health and strength, with the exception that when he swallows fluids of any kind he has to incline his head very much forwards and downwards, or, otherwise, whatever he drinks will gush out at his nose. Also he has, in a great degree, lost his voice, which is now almost inaudible, at a short distance, in common conversation.

We have never been able to decide, with certainty, what has become of the ball that entered the neck; it has never been seen, nor has its resting-place, if it has any, been ascertained. After a careful review of all the circumstances, however, our conjecture now is, that it must have lodged near the opening made in the œsophagus, and during the coughing and struggling, just after the reception of the wound, which was very great, fallen into the stomach, and passed off by stool. The ball, which was quite small and oblong, that passed through the pelvis, was taken from his clothes soon after he was wounded.

It is conceived that this case presents several points of interest. That the trachea and œsophagus were penetrated there can be no doubt, as also some of the larger branches of the bloodvessels of the neck. These facts are proved by the free escape of air and water from the external orifice, with the large quantity of blood lost externally in so short a time, as well as that which found its way into the stomach and passed off by stool afterwards.

CASE X. Gunshot wound of the neck, involving trachea, œsophagus, internal jugular vein, and subclavian artery, etc.; patient survived fourteen days. By S. D. Gross, M. D., Prof. of Surgery in Jefferson Med. College. *American Journal Med. Sciences*, 1848.

For the report of the following case, so interesting both in a pathological and a surgical point of view, I am indebted to my talented and zealous pupil, Mr. T. G. Richardson, one of the assistant demonstrators of anatomy in our University.

On the 14th of September, 1846, J. K., a lad, fourteen years of age, of a scrofulous constitution, the son of a merchant of this city, was wounded by the accidental discharge of a gun, upon which he was supporting himself with his right hand in the act of jumping from a fence. The principal part of the load, which consisted of large squirrel shot, was expended upon the extremities of the fingers, the wrist, and forearm of the same side, producing a deep lacerated wound in the direction of the bend of the elbow, while the remainder entered the anterior and lateral portions of the neck at four or five different

points. Three or four of the shot entered together immediately above the middle of the clavicle of the right side; one perforated the trachea; another lodged in the region of the right internal jugular vein; and a third penetrated the skin a short distance from the left border of the windpipe, passing about one-third around the neck in the subcutaneous areolar tissue, in which it could be distinctly felt.

The wounds were attended with little hemorrhage, and the patient soon recovered from the shock consequent upon the injury. Professor Gross removed the last phalanges of two of the fingers, directed cold water to be applied to the wounds of the wrist and forearm, and enjoined a strict observance of the antiphlogistic regimen.

The next day there was some traumatic fever, with slight emphysema around the opening in the trachea, some difficulty in swallowing and expectoration, and an increased secretion from the air-passages. A gentle laxative was prescribed, and the cold water dressing continued.

For a time everything went on favorably: the wounds in the neck healed without any application, the sore in the forearm became covered with healthy granulations, and the general health seemed to be perfect. Suddenly, however, on the 27th of Sept.—thirteen days after the accident—and without any premonitory symptoms, the patient was seized with a protracted epileptic convulsion, chiefly affecting the left side, and died the following day without any return of consciousness.

Autopsy.—The shot that had perforated the trachea was found to have passed also through the œsophagus, and to be imbedded in the fibro-cartilage between the third and fourth cervical vertebræ. The œsophagus at this point was separated from the spine by an abscess, extending from the second to the seventh cervical vertebra, and containing about three-fourths of an ounce of serofulous pus. The openings made in the windpipe, and the anterior wall of the gullet, were closed, but the one in the posterior wall of the latter tube was still patent, and communicated with the cavity of the abscess, without, however, permitting any escape of its contents. The parts around the purulent deposit were indurated by a copious effusion of lymph, which, on the left side, intimately glued together the common carotid artery and jugular vein, the pneumogastric and sympathetic nerves, and the descending branch of the ninth pair.

One of the shot which entered above the clavicle of the right side had perforated the subclavian artery, and lodged in the first rib. The caliber of the vessel was perfectly pervious, and the openings in its walls were beautifully closed by a small clot extending around the outside of the tube. Upon removing this clot, which was the only effused blood in the neighborhood, the margins appeared as if the wound had just been inflicted. No marks of inflammation of the artery were observed. The remainder of the shot that entered at this point were found upon the same rib, on the outside of the brachial plexus of nerves, completely encysted.

The shot that entered the region of the right jugular and carotid had perforated the anterior wall of the former vessel, and lodged on the inner surface of the opposite wall, where it had become completely encysted. The vein bore no evidence of inflammation; its cavity, however, was somewhat diminished by the projecting cyst; the opening in front was perfectly closed; and there was no external or internal clot.

No morbid appearances were discovered in the brain or spinal cord, except a little serum in the lateral ventricles of the former.

Some account of the most remarkable wounds received at the siege of Sevastopol. By D. J. Dunigan, Esq., Surgeon, etc. London Times and Gazette, 1855.

I. *Shell Wounds.*

A seaman, knocked down by a fragment of mortar shell, was picked up dead. The head was apparently swept from his shoulders, but there was no trace of hemorrhage. On disentangling his clothes, which were tightly jammed around the injured part, the head was found driven downwards into the chest, carrying with it a great portion of blue shirt and red comforter. A small tuft of hair alone was visible, at the bottom of a deep cavity. It was a regular intussusception.

An officer of engineers had just entered the battery, when a 13-inch mortar shell fell close by him, exploding as it struck the ground. One thigh was blown into the air; the other, with its bones, shattered throughout, but retaining its continuity by means of the integuments, was thrown around the back of his neck, and hung pliantly over the opposite shoulder, just as the arm of a child might lie in contact with its mother's neck. He lived for a few minutes.

A shell from the Malakhoff burst through the embrasure of the right Lancaster gun, disabling four men. One received a compound comminuted fracture of the left thigh, and a similar injury of the arm; the second, a compound comminuted fracture of the left thigh; the third, a comminution of the right knee-joint and ankle, both which joints were widely open. About a pound weight of the iron shell was immovably impacted in the inner condyle of the femur. The fourth was an artilleryman at the next gun, whose tarsus was injured. There was extensive laceration in the three first cases, and the shock was extreme; there was an oozing or welling of blood in two of them. The medical officers attended to those cases where the men fell in rear of the embrasure, at which the enemy still continued to pour their shot and shell, but, fortunately for the medical officers, with less precision than before.

A shell was fired at a group, principally composed of sappers and miners. One was killed, his face having been shot away. Another was carried up to the first parallel badly wounded. On examination it was found that half of the inferior maxilla of the dead man was driven into the roof of the second man's mouth.

A night or two after the capture of the Quarries, a man was killed in them by a shell from the Redan. An officer of the 97th, who was standing close by, received several severe superficial wounds from splinters. A foreign body was imbedded in the middle third of the left thigh, which was easily withdrawn by the finger. It was a large portion of one of the cylindrical bones of the man who had been killed; it was as sharp as a chisel.

Two artillerymen stationed in the 8-gun battery, in the advance, on the right attack, were sitting or lying down, engaged in conversation, when a shell exploded as it approached their position. The head of one was taken off, as if by an axe, above the neckcloth, the tie of which was undisturbed. The forearm of the other man must have lain in juxtaposition with his thigh, for both limbs were lopped off by the same blow, in a line corresponding with Poupart's ligament. This man lived for about half an hour, urgently requesting all around him to keep sprinkling his face with water. The wounds in both limbs were jagged. The muscles of the thigh were drawn out in long bands; there was no hemorrhage.

Another artilleryman, somewhere about the same part of the works, had his left knee-joint laid open and comminuted by a fragment of shell: no shock; a slight hemorrhagic oozing. As he approached the medical officers on a

stretcher, he facetiously asked if it was not "a wooden leg for him?" and as he was being carried to camp he asked us "to make the leg for him."

A 13-inch mortar-shell dropped so close to a seaman that it burned his perineum, testicles, and clothes as it burst. One of the ankle-joints was laid open; but the wonder is, how he escaped being blown to fragments.

About the central point of Gordon's battery, a shell burst among a gun's crew. One poor fellow was struck over the angle of the ribs. He uttered a cry for the doctor, and rushed about twenty yards, when he staggered, fell, and instantly expired. His heart and great vessels were ruptured. A second man's face, right shoulder, and arm, with the trapezius and latissimus dorsi, were torn away from the body. A third received a compound fracture of the ankle-joint, and a similar one of the ulna. The fourth escaped with a severe laceration of the calf of the leg.

An artilleryman, sitting near one of the magazines, had part of his thorax and shoulder cut away, in a line from the sterno-clavicular articulation to the hypochondrium, by the half of a 13-inch shell falling upon him.

As the Military Relief entered the Right Attack early one evening, the enemy opened a fire of shell upon them from the Garden batteries. One burst over the head of the column, by which two men were killed, and about a dozen seriously wounded, the legs and arms of some being carried away. One man, whose forearm was destroyed, had all the comminuted bones driven into the thigh.

II. *Wounds from Round Shot.*

These wounds are easily recognized at the first glance, as there is but little variety in the appearance they present. Most of the men killed by shot had their heads knocked away, either completely or in part. However, some cases occurred where those large projectiles went through the body, and even through the upper part of the thigh, making orifices of entrance and exit.

A bombardier, at one of the mortar batteries, while in the act of laying the mortar, was struck over the ribs by a spent shot, which had barely sufficient force to ricochet over the parapet, and drop into the covered way. As soon as the man was struck, he uttered a loud scream, and, as he fell, made a convulsive death-grasp, and seized the cap of the officer who was standing beside him. Death was instantaneous, although there was no mark nor breach of surface to show the size of the injury. Nothing could persuade his companions against the idea of his having been killed by a "wind contusion."

During the past winter, a shot ricocheted with great force over one of the parapets, carrying away the cap from a seaman's head. The man was a little stunned, but no further mischief ensued. When his cap was picked up it contained a handful of hair, which had been shaved from the scalp by the shot. This would have been a "poser" for the old wind contusionists!

III. *Bullet Wounds.*

Our advanced trenches being, in many places, within forty yards of the enemy's rifle-pits, wounds of great severity were inflicted on both sides, as the force of the bullets was undiminished by distance. The orifices of exit, caused by the conical balls, more resemble shell-wounds, in some instances, than a bullet aperture. In wounds about the head, especially, I have seen nearly the whole of the parietal bone carried away.

Notwithstanding those jagged wounds from Minié balls, I have seen a soldier of the 41st hit by one on the nose, which caused as clean a wound as if done by a sharp knife. The nose was divided at the junction of the cartilages with the bones; the lower portion dropping down, but adhering by a good pedicle. It was brought together, as in hare-lip.

Most of the wounds caused by the new conical bullets are, however, remarkable for the manner in which they plough up the soft parts.

A soldier of the 33d was struck by a ball which made six openings. It passed through the right thigh, through the serotum, and through the left thigh, where it escaped.

The Russians use several kinds of bullets—one a solid conical ball, which belongs to the Liége rifle; another of a larger size and conical form, hollow at the base, with a small pillar, or nipple, standing in the cavity. It is surrounded by three lines. At the base, to guide the ball in its flight, there are two other smaller ones, modifications of this principle. The old round ball is also still employed. In some cases two of these round bullets have been found connected by a transverse wire, like bar-shot.

IV. *Grape-shot Wounds* have been severe and numerous. The following was an interesting case:—

A soldier of the 49th was struck on the temple by a grape-shot, which destroyed the squamous portion of the temporal bone. The brain was flowing through the wound, and the man breathing stertorously. The grape-shot was supposed to be within the skull. It was subsequently found in his mouth, at the base of the tongue, pressing against the epiglottis.

CASE XI. *A ramrod transfixing and lodging in the hand and forearm longitudinally; use of arm recovered.* St. George's Hospital. *Lancet*, 1850.

A wound of a very unusual description was lately inflicted on a young man of twenty-three, who was admitted under the care of Mr. Tatum. From the patient's statement it would appear, that on the 25th ult. he was out shooting blackbirds. Whilst reloading his gun, the ramrod remained fixed in the wadding. He requested a boy who accompanied him to take hold of the butt-end of the gun, while on his side, he seized the ramrod with his left hand, making efforts to extract it. By some unfortunate circumstance the gun went off, and the ramrod entered the palm of his hand, passed under the annular ligament, along the muscles of the arm, through the interosseous ligament, and came out a little below the external condyle. The greater part of the force impressed on the ramrod by the discharge of the gun seems to have been expended on the trajet just mentioned, for only its extremity could be seen at the condyle. A very curious circumstance is, that the patient was not aware of being hurt, and looked round to find out whence the report had come. He, however, soon perceived the smoke issuing from his own barrel, and was surprised and frightened at seeing the ramrod lodged in his arm. The patient endeavored to pull it from its situation, but his efforts were in vain—it was so tightly fixed that he could not move it. This effort was more than he could bear, and he was on the point of swooning, when he called some men to his assistance, who assisted him home in a very feeble state. When attempts were made by a surgeon to extricate the foreign body, he failed, until he placed his foot against the bed and pulled with all his might, whilst a second person fixed the patient's trunk. At last the ramrod yielded; very little blood escaped, and the patient felt no pain for the next two hours, but after this period it became very acute through the whole course the projectile had taken, viz., from the wrist to the elbow. Compresses, with Goulard's lotion, were applied, and calomel and Dover's powder administered. The patient had several fainting fits during the day, but passed a tolerable night. The next day he was admitted under the care of Mr. Tatum. The arm was red and swollen; the openings at the wrist and elbow were somewhat ecchymosed, but of a small size, and Mr. Tatum judged that the rod had taken the course described above, from finding the tenderness, on pressure,

suddenly stop half-way up the anterior aspect of the forearm, and continue upwards from a point exactly posterior to that region. The treatment now adopted was vigorously antiphlogistic. Mr. Tatum ordered leeches to be applied to the wrist and elbow, and this measure was repeated six times between the 26th of January and the 7th of February. During the first week the patient complained of much pain along the wrist and forearm, but this gradually diminished. The discharge was of a healthy nature, though at first mixed with gunpowder; and the only uneasiness now complained of (a fortnight after the accident) is numbness in the wrist, and occasional spasmodic twitches from the ring-finger to the elbow. The general health has not been impaired by this accident. It should, however, be noticed, that the patient is of a good, sound constitution, and of regular habits. Whilst the arm lay on the splint, a slight amount of oedema was noticed in the fingers, but this soon gave way. The patient left the hospital, and has now returned to his avocations, those of assistant in a surgery, and makes a free use of his hands. From the slight amount of hemorrhage and of nervous lesion which accompanied this wound, we are driven to suppose that, the extremity of the ramrod being blunt, the vessels and nerves were pressed aside by it as it passed through the forearm, the rod gliding between the bones and along the posterior surface of the radius. There can be no doubt, on the other hand, that the soft parts must have suffered a good deal of contusion and tearing, and that the inflammatory phenomena would have been rather alarming had they not been kept off by the antiphlogistic measures which Mr. Tatum adopted.

CASE XII. Impalement upon a pitchfork handle entering the vagina; recovery. American Journal Med. Sciences, 1853.

Dr. Sargent, of Worcester, reported the case, which had occurred in his practice nearly two years ago. A lady, of about 37 years of age, who had borne several children, the last about three years previous to the injury about to be mentioned, and whose last menstrual period had been about a week before, her bowels also being in good lax condition, in sliding down from a hayloft, impaled herself upon the handle of a pitchfork, which passed in at her vagina to the length of twenty-two inches, when her feet struck the ground. The handle was immediately withdrawn, the patient carried into the house, and Dr. S. sent for. He found the patient, half an hour after the injury, lying on her back, with the thighs flexed, and the skin cool, pale, and moist (as if from fright), and the pulse not much accelerated. There was no external injury, and no physical evidence of effusion into abdomen or thorax, and no urine nor feces on the garments, nor about the person, nor on the field of the accident, nor on the handle of the fork. There was some blood flowing from vagina. Patient passed water during the visit, and it was not stained with blood. She complained most of pain in the left side of the thorax, on a line with the scapula. Dr. S. saw the handle of the fork, which was rounded, a little larger at the end than elsewhere, perfectly smooth, two inches in diameter, and showed distinctly the stain of blood up to an abrupt line, twenty-two inches from the end.

Dr. S. theorized in this case, that the instrument must have perforated the vagina at its upper part to the left, and gone between the uterus and rectum. [If it had gone to the right, it would have perforated the cæcum.] The form of the instrument would make it much easier for it to pass between than to perforate organs, and Dr. S. supposed that it passed in front of the kidney, behind the spleen, and between the diaphragm and false ribs, peeling up the costal pleura till it reached the scaleni muscles. The subsequent history of

the case, which showed a fracture of the first rib, while, also, there was at no time any effusion into the chest, proved this diagnosis correct. Supposing that the greatest safety of the patient was in what might be called *forced rest*, Dr. S. gave her one grain of morphia (by estimate), and bound her chest firmly with a broad bandage of new flannel, placing a towel, wet in cold water, between this and the skin. The morphia was repeated in an hour, and one-third of a grain three hours after. Patient passed water repeatedly in first twenty-four hours, without trouble, and without blood, and passed coagula from the vagina. The day following, there was emphysema above the left clavicle; and the day following, crepitus in the left axilla, high up, as if from fracture of bone. There was at no time any evidence of pneumonia or pleurisy, though there was deficiency of respiratory murmur in the left side of the chest from the pain in its expansion, the percussion remaining good.

The pulse stood at 120 for several days, and the opiates were continued about as long.

The injury was inflicted on the 7th of August, 1851, and Dr. S. was in daily attendance for nine days; and, occasionally, afterwards, for three weeks. The recovery was entirely favorable, the patient being left only with an ill-united fracture of the first rib, over which there was some painful swelling for several weeks, which ultimately subsided, leaving an osseous prominence in the supra-clavicular region, in intimate relation with the scaleni muscles.

CASE XIII. *Impalement of the body through the vagina by a tobacco-stick; recovery.* By G. S. Bryant, M. D., of Aberdeen, Mississippi. *American Journal Medical Sciences*, 1853.

During my residence in Amherst County, Va., in 1850, I was called, on the 25th of April, at about 3 P. M., to see Phœbe, a slave, æt. 25, black, smooth skin, small stature, and the mother of three healthy children.

On arrival, learned that, at about 2 P. M., patient had leaped from the height of ten feet, and alighted upon a tobacco-stick which had been driven firmly in the ground and was concealed by some loose fodder. The stick was four and a half feet long, and one inch square. The vagina was entered without doing much injury to the vulva; the stick passed up the canal, and perforated its walls on the right side of the os uteri, entered the cavity of the abdomen, and passed in an oblique direction upwards, and finally lodged against the twelfth and eleventh ribs of the right side.

4 P. M. Hemorrhage quite subsided, but at the time of the accident it was very profuse from vagina; pulse 120, and very small; extremities cold; countenance anxious; pain in abdomen distressing; nausea and frequent vomiting; mind clear.

Treatment.—R. Tinct. opii ʒj; brandy ʒij. To be given at once, and repeated every hour or two until reaction, or relief was obtained; warm applications to the extremities, and a poultice to the entire abdomen, constituted the principal treatment.

26th, 4 P. M. Slept during the latter part of last night, and has been sleeping occasionally during the morning, but is not altogether free from pain. Reaction took place at about 12 o'clock last night; pulse now 110, quick and hard; abdomen much swollen, hard, and tender to the touch; complains a good deal of the side, about the point where the stick lodged, and the lower region of the liver. The swelling and contusion externally are considerable, and she cannot bear the part to be handled; vulva very much inflamed; passes water with much pain and difficulty.

Dover's powder, gr. x, at bedtime, to be repeated during the night if necessary; effervescing draught every two hours; continue poultices.

27th, 10 A. M. Rested pretty well last night; pulse 112, hard; skin dry; abdomen very much distended and painful to the touch; eyes very red; has vomited some bilious matter; passes her water still with difficulty; bowels have not been moved since accident. R. Hyd. chlo. mit. gr. vj; rhei gr. x. Make iv pills; to be given at once, and followed by an enema of soap and water in six or eight hours, if no action is had by this time; anodynes and poultices continued; vulva to be frequently cleansed with Castile soap and warm water.

28th, 11 A. M. Pulse 100 and softer; has had several bilious discharges; some discharge of pus from vagina; no other material change. R. Blue mass, gr. xvj; Dover's powder, gr. xi. Make into viij pills. One to be given every six hours. Continue effervescing draught, poultices, etc.

29th, 10 A. M. Abdomen enormously distended, dull on percussion, and painful on pressure; bowels have been moved twice, discharges of bilious character; pulse 118, small and quick; rested badly last night; skin dry, tongue coated over with a brown fur. Continue treatment.

30th, 10 A. M. Had, about 2 o'clock last night, a copious discharge of grumous blood from the bowels, which discharge continued to occur every hour or two until 9 A. M. this morning; could not ascertain the exact quantity, nurse supposed it to be from seven to eight quarts; this is no doubt a too liberal estimate. Abdomen has gone down very much; pulse 130, small and feeble; skin dry and cool; she seems quite exhausted; vaginal discharge continues. Ordered half a grain of sulph. morphia at once; infusion of serpentaria $\mathfrak{z}\text{ij}$, to be given at intervals of two hours. Continue pills and poultices, but discontinue draught.

May 2, 9 A. M. Abdomen much flattened; had two bilious discharges yesterday, free of blood; pulse 112, small and soft; vaginal discharge more profuse; passes her water freely; skin dry; has some appetite. Continue treatment.

4th, 10 A. M. Has done well since last visit, until last night. Nurse thinks she was alarmed by a conversation which took place in the room upon the subject of death and her probable recovery. After an hour or two she was better, and again expressed her belief that she would get well, never before having any doubt about her recovery. Bowels have been moved once this morning; biliary secretions improving; skin continues dry; pulse 108; appetite better. Continue treatment; is allowed a more nutritious diet.

6th, 10 A. M. Pulse 108, soft; skin moist; bowels in good condition; appetite good; vaginal discharge diminishing; complains of little else than soreness in the right side.

Ordered tonics and better diet; mercury discontinued; no appearance whatever of its constitutional effects.

8th, 12 M. Convalescing. Continue tonics.

11th, 11 A. M. Convalescing rapidly.

Recovered fully by the middle of June following.

ABERDEEN, August 27, 1853.

Dear Sir: Yours of the 14th inst. is before me, and I hasten to reply to it. I thank you for the kind suggestion with regard to my article. I see now that the case was reported with too little care, and it occurred in this way: After a thorough investigation of all the circumstances connected with the accident, I was so fully satisfied of the truth of the statement made by the woman, that I only noted the fact in my case-book at the time. On looking over the book the other day, I turned to the case, and thinking it would be of great interest to you, I copied and forwarded it at once.

I will now state from memory the account given me by the patient at the

time of my first visit, and which was frequently reiterated by her to me afterwards. She said that, on jumping upon what she supposed to be the loose fodder, she thought her belly was torn open, but found that she was hanging upon something, and that it had entered her body, and was resting against her ribs on the right side. She felt it distinctly with her hand, and in trying to extricate herself, everything turned black, and when she came to her senses, she was lying down with the stick driven in her body. Being alone at the time, she with much difficulty succeeded in getting it out herself, which was followed immediately by a gush of blood, which flowed freely for some minutes.

On first hearing this account, I doubted the possibility of the extent of the penetration. I had the stick brought to me, and on critical inspection I was satisfied that the stick had entered her body eleven and a half or twelve inches; it was thickly besmeared with bloody mucus twelve and a half inches, and its terminus was abrupt and distinct. It was quite clear that the stick was not stained by the fluid running down upon it.

The vagina being perforated; the peritoneal inflammation which followed, and particularly the path of disease extending from the pubes obliquely across the belly to the ribs on the right; the swelling, pain, and soreness in the side; the discharge of blood from the bowels; and the hepatic inflammation; all justified the conclusion in my opinion, that the account given by the patient was correct.

Now, doctor, if you have a doubt whether the evidence here given is sufficient to satisfy every mind, I wish you not to publish my paper. I should feel very uncomfortable under criticisms and doubts of its truth by the profession.

I leave the matter with full confidence in your hands, and beg that you will feel entirely at liberty either to destroy the article or to keep it for your private use, should you see fit.

I fear that I have already troubled you unnecessarily, and will bring this to a close, by assuring you, dear sir, that I am, with the highest regard,

Yours, most respectfully

G. S. BRYANT.

Dr. C. D. Meigs, Philadelphia.

CASE XIV. *Impalement upon the handle of a pitchfork, etc.* From Records of the Boston Society for Medical Improvement. Boston Med. and Surg. Journal, 1856.

Dr. Jackson, in allusion to the case of this accident reported in 1853, by Dr. Sargent, of Worcester (*Soc. Rec.*, vol. i., p. 344), remarked that he had recently seen the patient, who has entirely recovered from the effects of the accident, and that there is still evidence, from the projection which is now apparent over the first rib, that this bone was broken; the posterior fragment having been drawn upwards by the muscles of the vertebræ. The accident happened in 1851.

Dr. Coale mentioned that there were several remarkable cases of penetrating wounds or impalement, on record, and the number of cases of recovery from these is very striking.

Dupuytren, in his clinique at the Hôtel Dieu, gives one, recorded in the *Rev. Méd. Française et Étrangère* for March, 1834. A child fell from a cherry-tree upon the end of a vine trellis, which pierced its chest from behind forwards from the superior angle of the left scapula, through the thorax and abdomen, coming out at the right groin. The trellis, of oak, two fingers' breadth in thickness, was broken off, but still leaving enough projecting by which to extract it. Perfect cure occurred in 15 days.

Another case is recorded in the *Gazette des Hôpitaux* for July 4, 1835, in which the subject fell, also, from a cherry-tree upon a trellis. He had taken a little too much wine at dinner, and was essaying to finish his dessert in the tree, when the branch broke. It occurred on Friday evening, and a surgeon being immediately called, he made ineffectual attempts, for five hours, to extract the wood, without the slightest advance. The next day, attempts were made with counter-extension, and the aid of three more men, to extract it, but still without avail. On the third day, after further attempts with pulleys, hooks, and other appliances, and various manipulations, enlarging the wound and rotating the piece of wood, it was at last withdrawn, and found to be considerably swelled by the absorption of moisture from the body, to which circumstance its fixidity was imputed. The coccyx was found broken, and the rectum torn, besides an immense laceration of the integuments and muscles. There was retention of urine, but no paralysis of the inferior parts. The portion entered was eight inches and five-eighths in length, one and five-eighths in breadth, and one and an eighth in thickness. The condition of the patient, eight days afterwards, was reported as very satisfactory.

A third case is also reported in *La Lancette Française*, which also occurred by a fall from a cherry-tree upon a vine trellis; but the details are meagre, and the result not given.

Scaruffi, in the *Gaz. Toscana delle Sc. Med.-fisiche*, June, 1844, reports a most remarkable case, the patient being five months advanced in pregnancy. She was aged 24. She fell from a tree upon a stake, which entered at the inferior edge of the superior third of the thigh, passed upwards and backwards, and was felt in the left lumbar region. In the efforts to pull it out, it was broken off seven inches within the outer wound. An incision was made in the lumbar region, and after some difficulty in disengaging it from the two lower ribs, it was extracted. She aborted about five hours after the operation, and great reaction set in, but she did well. The two wounds, of entrance and exit, were seventeen inches apart.

Another case is recorded in the *Ann. de la Soc. de Med.* by Bessems. A lad, aged 14, fell on a blunt iron spindle a foot long, which entered at the buttock and came out near the navel. He did very well.

CASE XV. *Extensive incised wound of the abdomen, liver, and lung; recovery.* By Heman Allen, M. D., of Deckertown, New Jersey. *New Jersey Med. Reporter*, 1855.

In April, 1823, James Macdonals, aged eight or ten years, fell upon a sharp grass scythe in such a manner that his right side was laid open by the wound, commencing several inches below the centre of the false ribs, passing upwards, a little obliquely forwards, dividing all the false ribs nearly in the centre, and also dividing three of the true ribs, and partly dividing some of the others above; also wounding the *liver* by an incision about the length, breadth, and depth of a middle-sized man's forefinger, dividing the edge of the *diaphragm* at its junction with the false ribs, and laying open a wound on the right lobe of the *lung* very similar in magnitude to that made on the liver, yet a little deeper: dividing a *bronchial vessel*, which opened about half an inch in diameter, the air rushing out with sufficient force to blow out the candle at a distance of two feet or so. This took place on removing the clothes to inspect the wound. Applied cloths dipped in a solution of sacch. sat. in vinegar and water, laid him on his wounded side, shoulders elevated, and kept quiet with an anodyne and strict attention till morning. Had to wait two or more hours in the morning for the consent of his parents to have an operation performed,

as they thought it utterly useless ; was at last consented to. Removed the dressings, passed my forefinger three times into the wound above the diaphragm, and removed coagulated blood, in quantity amounting to two-thirds of the size of a hen's egg ; closed the wound with eight separate stitches, an inch apart, leaving an inch or more at each angle of the wound ; covered it with dry lint ; stayed with common cerate ; did not remove the dressings before two or three days ; the wound healed almost wholly by the first intention ; removed the stitches in due time. Patient was able to walk about in three weeks, and play a little in six, though somewhat lop-sided.

* * * * *

The foregoing statement is well known by Dr. Alexander Linn, of Deekertown, who was then a youth, and a near neighbor to the family. The boy grew to be a healthy man, and lived till within about three years ago. I thought of publishing the case at that time, but procrastination and a press of business have prevented till this time. Conversing with Dr. Linn on the case, not long since, he thought it certainly ought to be published ; and the circumstances were so strongly impressed on my memory, that I think there is nothing material omitted in the relation ; and I am certain there is nothing added to the facts.

CASE XVI. *An extraordinary recovery after a wound inflicted to get at the kidney fat.* Lancet, 1852.

TO THE EDITOR OF THE LANCET :—

Sir : My friend, Mr. Embling, late of Brompton, has sent me, from Fort Philip, the following account of a recent case there :—

“The natives esteem the kidney fat very highly. Two natives enticed a black lad of their own tribe into the bush. They cut his right side open from eight to ten inches in length, turned the viscera on one side, and groped for the kidney ; but, the boy being lean, they got no fat from him. They stuffed into the wound a piece of the bark of a eucalyptus, nearly a foot long, and thinking him dead, left him ; but the boy had feigned death to avoid being killed, knowing well what they were after ; when the men were gone, he looked round, and after lying an hour or more, he got up. Having been resident with a settler, he had a needle and thread with him, and putting into the gaping wound three single stitches, he crawled to his master's house. They put him to bed. A white “doctor” came, a very ignorant man evidently, for he never examined the wound, but at once strapped it up.

“After some days, the wound not closing, but beginning to suppurate (and the gum tree is exceedingly venomous), the boy wished to see the old man of his tribe. The black doctor came, ripped the wound open, and showed the astonished white man the piece of bark which his want of skill had left in the wound ; and after a few weeks, marvellous to relate, the boy got quite well, and is now about here as usual.”

This extraordinary case, though of necessity incomplete, from not having been treated by any practitioner capable of specifying the parts divided by the wound, appears worth recording, as a remarkable instance of the reparative power of the human frame, as well as a proof of the dearth of sound surgery in Australia.

I am, Sir, your obedient servant,

Knightsbridge, Jan. 1852.

F. A. B. BONNEY.

CASE XVII. *An extraordinary case of burn, with recovery.* Baron Alibert's Lectures in the Lancet, 1833, vol. xxiv.

In early times it is said that all extraordinary cures were announced in the public places, and the mode of their performance declared. I may, on the

same principle, mention a case here, which is at the same time consolatory to humanity, and creditable to the resources of art. I have already mentioned the conflagration that took place in Paris, at the ball of the Austrian ambassador. Amongst the victims of that disastrous evening was the prince of Kourakin, a valued diplomatist, who was healed with wonderful success by M. Piet. The prince was certainly one of those most injured by the fire. When carried home his death seemed close approaching; his forehead was covered with blisters, his eyelids scorched and greatly swollen, his head covered with black burns. Every degree of combustion was present in his person: the left ear was reduced to charcoal, the surfaces of the limbs were deprived of epidermis, the left hand was nearly roasted. The skin was black in several places, yellow in others; where it preserved traces of organization, it came away in detached flakes gorged with blood. Here and there were seen hard, dusky, and insensible eschars; the nails were either torn off or else loose. The pain was so horrible, that the patient uttered piercing cries. He experienced faintings and convulsions. His sufferings had been much increased by the numerous military orders, etc., which shone on his dress. Some of them were melted on his breast, and his diamond rings were converted into so many fiery circles, which strangulated his fingers. The first dressing, consisting of almond oil and lint, covered with an opiate cerate, was spread over the enormous sores, by which means the pains were slightly relieved. The pulse, however, rose, became hard and frequent. Fever set in with all its vehemence. Soon after, he became calm, complained little, and was in a state of mental stupor. It was now found that the skin had been burned through to the muscles. On the fifth day the scalp swelled considerably, and soon after erysipelas of the face supervened. M. Dubois, and some other practitioners, were now consulted by M. Piet. Inflammation of the meninges was apprehended. The heat of the atmosphere was moreover excessive, and general gangrene seemed by no means unlikely.

To ward off these fearful accidents, the prince was placed on the use of the decoction of quinquina by the mouth, and injection, with the addition of a little camphor. Diluent drinks and rigorous abstinence were enjoined. Poultices were applied to dissipate the swelling of the scalp. The other surfaces were dressed with cerate. The arm and forearm, which were the parts most injured, were covered with doubled cloths steeped in camphorated spirits, renewed at intervals. The most minute attentions were, moreover, lavished on the patient. Servants agitated the atmosphere about his person. His bed was surrounded by basins filled with ice. At certain hours his apartment was filled with odoriferous plants and vinegar, and aromatics were continually kept burning. On the 6th of July he felt a little relieved. Some broth was given, and the bark continued. The eyelids commenced to open, and hopes of recovery were now entertained. The sores now followed their regular course, frequently, however, retarded by various thwarting incidents. Hemorrhage supervened, and caused great weakness, and the prodigious suppuration increased this state of prostration. Occasionally, horrible pain was experienced on the separation of some of the burned portions of the skin, and the consequent exposure of new and raw surfaces. The dressings always lasted two hours, and occasioned such torture, that to prevent fainting, it was necessary to intermit them occasionally.

Notwithstanding all this, on the 20th of July the patient felt an appetite for solid food, and from the 27th of July the progress of convalescence was uniform. Finally, after ten weeks of suffering, MM. Piet and Dubois had the satisfaction of witnessing a perfect cure, effected by their inventive genius and sagacious treatment. We cannot but admire the gradation of the means

they employed to moderate this enormous inflammation, to allay the pain, to direct the suppuration, to prepare the fall of the eschars, to dry the ulcerated surfaces, to correct the deformities, and to arrest, in fine, the sympathetic disorders which occurred every moment. There was a time when the treatment of burns was an object of speculation to the empiric, but we see by these details that to effect such a cure requires the dexterity of an ingenious surgeon, the intelligence of a skilful physician, and all the resources the consummate practitioner can command.

CASE XVIII. *Recovery from the effects of an almost perpendicular fall of one hundred and seventy feet.* American Journal Medical Sciences, 1837.

The following surprising case of a fall, the distance of 170 feet, almost perpendicular, with recovery, is recorded by J. Patterson, Esq., in the *Edinburgh Med. and Surg. Journal* for January last. Private Thomas Gough, 42d Royal Highlanders, aged 19½ years, on the 29th of August, 1837, whilst in a state of intoxication, attempted to escape from the castle of Edinburgh, in consequence of being refused leave to visit the city. For this purpose he chose the south side, and made his exit through a small embrasure overlooking the most precipitous and rugged face of the castle-rock. His intention was to jump upon a projecting ledge, from which he imagined he could scramble down the remaining part of the descent; but in doing so he broke his left leg; and, in his own words, "sotted from rock to rock, till the road huppet him." He fell from the astonishing height of 170 feet, almost perpendicularly; and was found on the road, immediately after his fall, quite insensible, and bleeding profusely. He was instantly carried into the castle, and on examination it was found that he had received the following injuries, viz. : three deep wounds on the head, in two of which the bone was exposed, and there was a fracture over the right frontal sinus; the left clavicle was fractured about one inch from the sternal articulation; the right wrist-joint was dislocated backwards, and both the radius and ulna of the same side were fractured; there was an extensive contusion of the right ilium; and the left tibia and fibula were fractured about two inches above the ankle-joint.

He was occasionally delirious for several days; but, with this exception, not a bad symptom appeared. He is now (Oct. 2d) nearly well, and there is every prospect of his resuming his military duties in a very short time.

Dec. 14. The wrist-joint remained weak and enlarged for some time. He has now been discharged from the hospital; and for a month has resumed all his duties as an efficient soldier.

CASE XIX. *Perfect recovery from the effects of a perpendicular fall of one hundred and ninety-two feet.* Dublin Med. Press, 1850.

On the 8th of September, 1834, Alexander Boyd, of the coast-guard service, under the command of the late Captain Gilbert, R. N., whilst patrolling on the cliffs which overhang the sea, in the vicinity of Kenbarwn-head, near Ballycastle, in the county Antrim, mistook his way, owing to the extreme darkness of the night, and fell over a precipice, rising sheer from the sea-mark, as I afterwards ascertained by measurement, to the height of 192 feet. In his descent he grazed slightly the face of the cliff at one point only, about 93 feet from the summit, and fell on a slip of grass land lying between the base of the cliff and the sea. Here he lay for some hours, until a little dog, the companion of his walks, gave the alarm by whining at the door of his cottage, and caused a search to be instituted along the coast. The circumstances of his almost miraculous escape attracted so much attention at the time, that the

place where this extraordinary accident occurred was visited by great numbers of persons for many weeks afterwards.

When called to see him on the following day, I found that the femur had been fractured obliquely at the superior portion of the middle third, and the patella of the same side, longitudinally. Slight abrasion of the cuticle of the leg and the outer ankle were observed, and the thigh and knee were greatly swollen. He complained of severe pain at the upper part of the sternum, and in the course of the splenii muscles, as well as of much dyspnœa, aggravated by deep inspiration. The pulse was 100, and the respirations 24 in the minute, the skin hot, the tongue white, and the bowels costive. His mind was apprehensive but unclouded, and no injury of the head was apparent.

As the injured limb was both very painful and much swollen, I at once determined not to attempt immediate reduction of the fractures, but to trust to secondary coaptation or setting, after the inflammatory symptoms should have subsided, contenting myself, in the meantime, with placing the limb in the position most easy for the patient, and supporting it by cushions properly adapted to prevent motion of the broken extremities of the femur. A cold spirituous lotion was directed to be applied with great regularity; the most perfect quiet and very low regimen were enjoined; a full dose of castor oil was administered; and on account of the injury of the chest, which obviously presented the chief source of danger, thirty ounces of blood were taken from the arm.

Sept. 10. The symptoms were little changed. An additional purgative was necessary, and calomel and antimony were prescribed in small doses, three times a day.

11th. The medicines have acted powerfully; the pain of the chest and difficulty of breathing are much abated; the swelling of the limb remains undiminished, but he complains of no pain in it except on motion; pulse 80, respiration 16.

12th. Gripping and tenesmus having occurred the mercury was suspended, and a draught, containing castor oil and laudanum, relieved the abdominal irritation. On the 15th the pectoral symptoms were completely removed, and the swelling and inflammation consequent upon the fractures sufficiently abated to admit of the application of a laced cap to the knee, and of the necessary bandages and splints to the thigh. The limb, when the fracture was reduced, was apparently of the same length as the other. Regular action of the bowels was promoted by the occasional use of aperients, and the patient was allowed a more generous regimen.

On the 22d, the apparatus having become somewhat disarranged, was cautiously removed, and the limb being found in its proper position, it was again carefully and firmly adjusted. The pulse 70, the bowels regular, and the appetite good. Animal food was now allowed.

On the 26th, considerable pain in the course of the thigh being complained of, the bandages were slackened a little, and an aperient administered. On the 5th of October, and again on the 13th, the splints were slightly readjusted, and the bandages tightened. On the following day, sharp pain at the site of the femoral fracture annoyed the patient considerably, but he received instant relief by the division of one or two turns of the bandage. On the 29th of October, the entire apparatus was removed, when both fractures were found to be consolidated; the limb apparently unshortened, but with imperfect power of motion, the muscles appearing paralyzed by long pressure and want of use. The knee also was somewhat stiff, and painful on flexion being used. The repeated application of a stimulant embrocation was therefore

directed, and careful passive motion of the affected joint, the entire limb being swathed in new flannel.

Nov. 2. The patient was permitted to leave his bed, his health being excellent, and the power of using the injured limb gradually increasing. By the middle of the month he could move about with the aid of crutches; and on the 8th of December, exactly two months after the accident, the only symptom which remained was a degree of stiffness of the knee-joint, preventing the full use of the limb. This gradually abated, and in a short time he was enabled to rejoin the coast-guard service, and to patrol as usual for several years afterwards. I have lost sight of him lately, but I believe he is still in the service.

· CASE XX. *Numerous fractures and dislocations in the same patient.*

Mr. John Adams, of London, relates the case of a man brought to a hospital of that city, who had fallen from the yard-arm of a ship and was found to have sustained the following injuries; in fact, to have been nearly knocked to pieces: Dislocation downwards of right humerus; dislocation backwards of right femur; dislocation inwards and backwards of the right tibia and ankle and a wound; fracture of the left tibia just below its head, and dislocation backwards of the fibula; comminuted fracture of the left os calcis; fracture of the external malleolus. This patient ultimately recovered.

Report of Baron Larrey concerning his operations on Napoleon's Generals.
British and Foreign Med.-Chir. Review, 1845.

General Almeras was severely wounded at the battle of the Pyramids. A musket-ball traversed the pelvis from before backwards, passing between the testicles, perforating the neck of the urinary bladder and also the rectum, and escaping from the inner part of the right hip. In spite of the dangerous nature of the wound, this brave officer recovered, and eventually served in the campaigns of Germany, Russia, and France. This case is certainly one of the most remarkable that I ever met with in practice.

General Arrighi, Duke of Padua, was wounded in the neck by a musket-ball at St. Jean d'Acre. The right carotid artery was wounded; and he must inevitably have died of hemorrhage if a soldier had not had the presence of mind to introduce his two forefingers into the wounds, until I arrived and tied the vessel. During the operation, a shell exploded over our heads; but, by a sort of miracle, none of the fragments struck us. The recovery was complete, and the General is still alive.

Prince Eugene Beauharnais was wounded by a ball in the right temple, at the seventh assault of the same fortress, St. Jean d'Acre. General Bertrand too was similarly wounded at the first battle of Aboukir. It was on this occasion that Napoleon first became acquainted with this most faithful and devoted of his servants.

Marshal Bessieres, Duke of Istria, received a severe contusion of the thigh in the celebrated battle of Wagram; his horse was shot under him at the time. This great warrior was subsequently killed by a cannon-ball, while reconnoitring the enemy's lines on the evening before the battle of Lutzen.

General Blaniac received, at Aboukir, a gunshot wound in the right side of the chest. The ball had passed from before backwards, following the direction of the third sternal rib to the seventh, which was fractured in its posterior third; the middle lobe of the lung was injured, and the intercostal artery lacerated. There was a good deal of hemorrhage from the anterior wound. Symptoms of sanguineous effusion into the chest subsequently occurred, and

the operation of *paracentesis thoracis* was performed by enlarging the wound behind. Upwards of a *litre* of dark colored fluid was discharged. By the most assiduous care, continued for three or four months, this meritorious officer quite recovered his health.

The only real wound that General Buonaparte (so he is styled here by our author) ever received in his long career of danger, proceeded from a kick of the first Arab horse which he mounted on leaving the Desert of Lybia. The contusion was followed by an extravasation of blood, to which I gave vent by a small incision. The wound quickly healed. (We have surely read somewhere that Napoleon received, in one of his Austrian campaigns, a contused wound of the leg, that proved, however, to be of no great severity, although great alarm was at first occasioned in the army by the rumor of it.)

General Caffarelli had his right elbow shattered at the siege of St. Jean d'Acre; he was overturned by the blow and fell heavily on his right side. The arm was immediately amputated, and everything went on favorably until the 21st day, when symptoms of hepatitis made their appearance. A few days afterwards he died. On dissection, several large abscesses were found in the liver; one of these had burst into the abdominal cavity. The suppurative inflammation had doubtless been induced by the fall.

General Champeau was severely wounded by a cannon-ball at Waterloo. Before I could reach him, a sudden charge of the English cavalry obliged me to withdraw to a considerable distance; and the poor wounded man, like many others, died on that disastrous field, without relief.

General Cheminau had his right leg disorganized by a cannon-shot, at the battle of Lutzen. Although the injury of the soft parts and bones extended close up to the knee, yet, as the joint itself appeared to be intact, I determined to amputate the limb immediately below it. Having made a flap, I disarticulated the head of the fibula, and sawed the tibia across, directly below the attachment of the capsular ligament. I was then surprised to find that the two condyles of the bone were separated by a vertical fracture; the ligament, however, remained uninjured, and there was no symptom of extravasation within the joint. A uniform and circular compression was maintained around the condyles of the tibia, and the dressing of the stump was finished by the application of my unremovable bandaging. This was not removed for nine days, and then immediately reapplied. The success was complete.

General Coutel, commanding the company of the aeronauts attached to the army of Egypt, and who, by means of ascending in a balloon, had ascertained the position of the enemy's army before the celebrated battle of Fleurus, received a musket-ball in his right arm at St. Jean d'Acre. Although the humerus was broken, and the injury of the soft parts severe, I determined to try to save the limb. The ends of the bone did not, however, unite, and a false articulation was formed.

General Count Daboville, now a peer of France, was wounded most severely in the right shoulder at the terrible battle of Wagram. This was one of the fourteen amputations at the shoulder which I performed on that day! Of these cases, twelve recovered perfectly; one patient was killed accidentally by being thrown out of the ambulance; and another died of hemorrhage during the subsequent evacuation of Vienna.

General Damas was killed by a cannon-shot which struck his chest at the battle of Moskowa. He was one of the 40 general officers who either fell or were most severely wounded on that dreadful day.

General Count Danthourd was wounded at the battle of Pesth (1805) by a musket-ball, which, after breaking his spur, doubtless penetrated into his

right tarsus, and there lodged deeply. Imagining that his wound was only a flesh one, he applied a piece of wetted rag to his foot, and straightway continued his march to the field of Austerlitz, at the glorious battle of which he was present. His wound healed; and he experienced no inconvenience in the foot until 15 years afterwards, when he began to feel sharp pains in a tumor as big as an olive, which was situated on the dorsal region of the tarsus. Two of the leading surgeons in Paris considered it to be an exostosis; and the General himself was not aware that any ball had ever lodged in the part. On his showing it to me I soon recognized what it was, and told him how he might get rid of it. The ball on extraction proved to be angular, and was lodged in a fibrous cyst.

General Desaix was wounded in one of the combats before the capture of the lines at Weissenbourg, by a ball which perforated his left cheek. He was killed at the battle of Marengo, "*dont il fixa la victoire.*"

The Duke Desalignac received a gunshot wound in the left foot and ankle-joint in the last combat of July, 1830. The limb should unquestionably have been amputated at the time; but this was not done, and on the seventeenth day after the accident, symptoms of tetanus supervened. On being called into consultation, I recommended that the limb should be amputated; but this proposal was not acceded to by the other surgeons in attendance, who, in consequence of the inflamed state of the leg, dreaded gangrene of the stump coming on. The operation was, however, performed early next morning. The edges of the wound were simply approximated, and kept so by means of lint smeared with a layer of styrax ointment; this position was facilitated by my having made during the operation, two perpendicular incisions, one over the crest of the tibia and the other on the opposite side. The first dressing was not removed for nine days, and then the wound was found to be suppurating freely; it was entirely healed by the 31st day after the operation.

General Dulong received a gunshot wound in the right axilla in the Polish campaign of 1807. The ball had passed through the tendon of the pectoral muscle and the plexus of nerves, grazing the shoulder-joint. Although there was scarcely any hemorrhage, there was good reason to believe that the axillary artery had been divided. Some years subsequently this officer called upon me for my advice. I then learned that, immediately upon the receipt of the wound, the extremity had been stricken with a paralytic torpor and a sense of most distressing coldness, and that no pulse could be felt at the wrist. It had been unwisely determined to try to save the limb. The consequence was, that the hand and arm remained quite paralyzed, and became so atrophied as to resemble a part of a mummy rather than of a living man. I recommended him to submit to amputation; but he would not. His infirmities increasing, he committed suicide.

Marshal Duroc, Duke of Friuli, was wounded in the right groin, by a piece of a shell at St. Jean d'Acre. At the close of the battle of Wurtzsch, 1813, a cannon-ball which had cut the body of General Kirschnor (who was riding at his side) in twain, grazed him in the belly. A large portion of the abdominal parietes was carried away, and the bowels wounded in several places. He survived about thirty hours in dreadful agony.

General Foy was under my care in his last illness, the disease being cancer of the stomach. "Had his medical attendants made use of the moxa as I recommended, his life might probably have been saved, as I have succeeded in doing so in not a few cases in private practice."

General Baron Ganan was wounded, at the battle of Dresden, in the occiput.

It was necessary to apply the trephine to remove some portions of the depressed bone: ultimately he recovered. "A phenomenon, little known to medical men, was often noticed by us in this case: when the ear was applied to the cicatrix over the perforation, the *bruissement* of the cerebral arteries were distinctly perceptible; and the General himself could hear the sounds of the voice when directed to the seat of the wound—a circumstance that still continues, and therefore clearly shows that the opening in the cranium is not yet entirely closed." (Is there anything wonderful in this?)

Marshal Grouchy received several severe contused wounds in the thighs and legs at the battles of Moskowa and Craoune. In the case of his wife, Madame la Marechale, I excised the left mamma for a cancerous tumor. This lady quite recovered; she subsequently died very suddenly from a sort of spasmodic cholera, or acute neurosis.

General Kleber received, at the capture of Alexandria, a ball that struck him in the right temple, divided the integuments, and grazed the parietal bone. I dressed the wound at the base of Pompey's Pillar, and he was sent on to Alexandria. He was subsequently killed at the battle of Heliopolis, where I was exposed to the greatest danger in the discharge of my professional duties.

Marshal Lannes, Duke of Montebello, was struck by a musket-ball in the right leg, at the battle of Aboukir. Symptoms of tetanus threatened to come on, but were fortunately subdued. He returned with his colleague Murat to France, a few weeks after General Buonaparte. He had been wounded also in the temple at the thirteenth assault of St. Jean d'Acre. Some years afterwards he received several wounds in various engagements in Spain. At the famous battle of Essling (1809) his right leg was shattered by a cannon-ball, which passed through the knee-joint and wounded the flesh of the left thigh. Immediate amputation was performed by me; and he was sent on to Ebersdorf, where he caught the typhus fever, which prevailed at that time in the army; he died on the 13th day after the battle.

General Lawless—once a Professor of Physiology in Dublin!—who commanded the third foreign regiment, consisting almost entirely of Irishmen, had his left leg shot away by a cannon-ball at Lovemberg, on the frontiers of Bohemia. I amputated the limb immediately below the head of the tibia; and, as the army was retreating back upon Dresden at this time, I advised my patient to ride direct to his own home in France, without doing anything to the dressings of his wounds, except sponging their surface daily, and keeping the stump enveloped in a piece of linen-cloth, or a sheep's skin. By following my directions, he rode on horseback the entire distance from the scene of action to his residence in Tours, having his stump all the while suspended by a belt that passed over his shoulders, and without having it dressed once. On removing the apparatus, when he reached his journey's end, the wound was nearly healed. As a mark of his gratitude, the General made me a present of a magnificent English engraving of Hunter.

Baron Menou, the third in command of the Egyptian army, was seized with sporadic plague, just before our debarkation to France; already there were three carbuncles on the right leg, and an incipient one had appeared in the right groin. Unwilling to make the Captain of the English frigate (Dido), which was to convey us home, acquainted with the real facts, I had the General strictly confined to his own cabin, and I then excised the carbuncles, administering internally camphor, nitre, bark, and laudanum. The wounds suppurated freely before they healed. He was completely cured when we reached Toulon.

General Viscount Mermet, in consequence of a fall upon his loins in one of the last actions in Italy under Prince Eugene, became entirely paraplegic; the palsy being accompanied with incontinence of the urine. Cupping in the first instance, and subsequently the repeated (20 times) application of moxa, restored him to perfect health, so that he was able to resume active service.

General Mireur, after having been wounded in the right shoulder at the glorious battle of the Pyramids, was murdered a few days afterwards by the Arabs, while conveying the orders from Buonaparte to Admiral Brueys, to weigh anchor and proceed direct to Corfu, for the purpose of taking in fresh troops and bringing them to Egypt. The death of this young officer was the cause of the destruction of our fleet at Aboukir, and of our subsequent loss not only of Malta, but also of Egypt, which would otherwise have become one of the richest and most beautiful of French colonies.

Marshal Moncey, Duke of Cornegliano, became affected, in 1830, with an enormous hydrocele. I performed an operation and effected a radical cure.

General Netherwood, in one of the combats in Syria, received from the hands of one of the Mamelukes a sabre-cut in the right thigh; the entire thickness of the extensor muscles was divided down to the bone, and even this was deeply notched. The wound was very large as well as deep. While one of my assistants kept the limb completely extended, I passed ten stitches from the bottom of the wound through the flesh and integuments, so that the edges might be retained in exact apposition throughout the entire depth. After being bandaged, the limb was placed in a fracture-box, and maintained in a state of extension. This excellent officer was subsequently killed in the expedition to St. Domingo.

General Count Pajol was wounded in the left forearm at the battle of Moskowa. As both bones were broken, and the soft parts much injured, many surgeons would unquestionably have recommended immediate amputation; but I determined to try to save the limb. After having freely *debridé* the wound, and removed all the fragments of bones, I brought the edges together, and applied my apparatus, which I rendered immovable, the forearm being kept bent and suspended in a sling. This distinguished warrior accompanied the march of the troops during the dreadful retreat from Russia; and, although the wound was not dressed above five or six times, it eventually cicatrized completely, without the movements of the limb being at all impeded.

General Silly was wounded by a cannon-ball in the right knee, at the second battle of Aboukir. I had scarcely completed the amputation of the limb, when a charge of the English cavalry came down upon us. I took the wounded man upon my shoulders, and carried him along a very uneven road, to the rear-guard of our army. I arrived at Alexandria with my honorable burden, and had the satisfaction there of completing the cure.

Marshal Soult was never dressed by me on the field of battle; but I attended him in Paris for a severe contusion of the leg, which had been fractured. A traumatic sanguineous tumor supervened; this required that a delicate operation should be performed. The success was complete; and my illustrious patient speedily recovered.

Marshal Suchet, Duke of Albufera, on returning from his most arduous campaigns in Spain, consulted me for a cancerous affection of the stomach, the precursory symptoms of which had already appeared. The disease, although it had been very sensibly arrested, finally proved fatal.

Marshal Vietor, Duke of Belluno, was wounded in the right thigh, at the

battle of Craoune (1814). The ball had passed between the femur and the femoral artery, which I found to be partly denuded; the sciatic nerve was injured. The two wounds were immediately *debridées*, and subsequently dressed after my usual plan. The Marshal continued to suffer from a traumatic neuralgia to the end of his life, in spite of every remedy that was tried.

General Zayonchek, 75 years old, was wounded in the knee at the passage of the Beresina. The wound required the amputation of the limb. I performed the operation under the cannon of the enemy, and while there was a very heavy fall of snow. To prevent my being incommoded by "ce meteoire," two general officers held the patient's cloak over our heads. He returned to Warsaw, his native place, and finally recovered. He was subsequently made a prince, and the Viceroy of Poland, by Emperor Alexander; he died at the advanced age of 86 years.

SECTION III.

REMARKABLE POISONED WOUNDS.

CASE I. *Hydrophobia, in which the patient took ice with relief; death.* By J. H. Griscom, M. D., Surgeon, New York Hospital. New York Med. Times, 1855.

The following experiments, made by Dr. J. H. Griscom, on a patient suffering from hydrophobia, at the New York Hospital, are quoted as reported by him to one of our city newspapers:—

I found the patient, at the time of my visit, on the bed, to which he was strapped to prevent injury to himself and others, perfectly calm to all appearance, intelligent, and entirely submissive to treatment. He conversed freely, though with some confusion of dates and facts respecting the time when he received the bite (between four and five weeks previous), and other circumstances connected therewith, and of his own feelings then. The scar was upon the lower lip, perfectly healed, and exhibiting no signs of irritation. As he thus lay and conversed, no one could suppose that he was laboring under so fatal an influence, unless either the finger was laid upon the pulse, which now numbered nearly 160, and was full and bounding, or he complained of the pain in his throat and difficulty of swallowing. On examining his throat, a degree of redness was observed in the fauces, accounting partially for the pain in deglutition. After giving further directions for his continual comfort and the prevention of more convulsions, it occurred to me to test the truth of some of the popular notions respecting this disease, especially in relation to that peculiar symptom from which it derives its name, viz., *the dread of water*. The results of these investigations, it is hoped, may have the effect, not only of correcting some false views on the subject, but, what is more desirable, of hereafter alleviating the intense suffering of those afflicted with the disease, if indeed they may not increase the means and probability of recovery.

The most distressing part of the malady, is undoubtedly the *difficulty and pain in swallowing*, arising from sharp spasmodic action of the muscles concerned in this function, extending sometimes even to those of the neck and chest, and producing a feeling of alarming constriction of the organs of respiration, causing almost complete though temporary suffocation, and thus aggravating, if not actually exciting, the convulsions, with the more or less violent contortions and discolorations of the countenance, protrusion of the eyeballs, and other active and painful symptoms. It is a popular idea that

all these are excited by the sight, and even by the sound, of water, and although an intense thirst almost universally coexists, the friends, and even the patient himself, anxious as they are to alleviate it, dread even the presence or sound of water, much more its approach to the lips, lest all these horrible symptoms should ensue. My investigations, simple as they are, show how relief may be extended in future in those most distressing symptoms—*thirst*, and parched and burning throat—if the means thus pointed out are sufficiently, promptly, and carefully attended to.

That the mere *sound* of water will not excite the paroxysm was proved in this case by the fact that the noise of a stream of water in a closet was continually within reach of his ears, to which he gave no heed whatever while I was by him, though it is said that when he first heard it he was unpleasantly affected by it. Observing this, I then desired to try whether its actual taste, *without swallowing*, could not be safely borne; and to this end I induced the patient to take a mouthful, but to hold it in his mouth without attempting to swallow. *He did so*, and after retaining it sufficiently long to satisfy both him and myself, at my direction he ejected it from his mouth, expressing gratification at its cooling effect.

One step further I determined to go, though not without some fear of producing a paroxysm of pain, and perhaps a convulsion. I sent for some ice, and with a little persuasion placed a small piece in his mouth, directing him simply to let it trickle down his throat as it melted, avoiding, as before, every effort at swallowing. A piece about the size of a thimble was first tried, the cooling effect of which was exceedingly grateful, and he willingly accepted a second piece. It was very difficult for him to avoid deglutition; he did succeed, however, and all the ice descended to the stomach, as it melted drop by drop, demonstrating in the most conclusive manner that water *per se* has no influence in the causation of the spasms, and that the disease is improperly named. It is not a *hydrophobia*, a dread of water; it is, rather, a *dread of swallowing*, whether of water, or any other liquid, or even of solid substances, as my patient said to me; and if that act can be avoided, as in his case, relief may possibly be afforded in others by the administration of cooling, and perhaps even more decidedly palliative remedies. In fact, encouraged by those observations, I directed the application of a strong solution of nitrate of silver to the fauces, with the view of allaying the irritation apparent there, and this he bore with not more difficulty than is noticed in a majority of the cases in which this astringent is applied for other diseases.

By these means and the administration of anodyne and nourishing enemata, the application of cool cloths to his overheated head, mustard poultices to his extremities, and dry heat to his general surface, and even by inducing him, a few hours before death, actually, though slowly and with some difficulty, but not so as to bring on any general paroxysm, to swallow some ammonia and brandy, the patient was not a little comforted, and his passage to the grave made more quiet and less painful. Unhappily, there is yet no known antidote to this mysterious poison, and the symptoms can only be treated on general principles. The ebb of life was attended with no unusual phenomena—none of the unnatural sounds, barking, or frothing, or biting, popularly ascribed to this disease being noticed. The vital powers became gradually exhausted, until, 9½ o'clock on the 15th, twenty hours after admission, he breathed his last.

CASE II. *Bite from the rattlesnake; recovery.* By S. W. Woodhouse, M. D.—the Dr. himself being the patient. Buffalo Med. Journal and Monthly Review, 1852.

Wednesday, Sept. 17, 1851. This morning Lieut. J. F. Parke, Top'l Engineers, U. S. Army, and I, were walking out to procure some specimens of birds, and when about two miles from Pueblo, I came within a few inches of treading upon a rattlesnake, who immediately coiled himself up and got ready to strike; jumping back, I drew out my ramrod and struck him over the back with sufficient force to break it. Being a fine specimen I wished to preserve it without further injury, when, placing my gun upon its head, seizing it, as I thought, immediately back of the head, I picked him up, but unfortunately I had too long a hold, when he threw round his head and buried his fang in the side of the index finger of my left hand, about the middle of the first phalanx. The pain was intense, momentarily producing, as it were, a severe shock, and accompanied with much nausea. I immediately commenced sucking the wound, and at the same time got Lieut. Parke to apply a ligature round the finger to prevent the too rapid absorption of the poison. I then scarified it freely and continued sucking until I returned to camp.

A man that was with us at the time I sent immediately back to get some aqua ammoniæ fort. and meet us on the road, which he did when we were about three-fourths of a mile from the town. I applied it immediately to the wound. Mr. Kern hearing what had happened, returned with him, and he wished me to try, as he said, the *Western Remedy*, that is to say, get drunk. This I had often heard of, and I was determined to try its efficacy. He was supplied with a bottle of *whiskey*, which I immediately commenced drinking; by the time I arrived at the Pueblo, I had drank half a pint. Already the glands in my axilla were getting sore and painful. Took some ammonia internally, scarified my finger freely, and held it in a basin of warm water, which caused it to bleed freely. Then commenced drinking *brandy*, at the same time held my finger in a cup of ammonia. *It took one quart of fourth proof brandy and half a pint of whiskey* (enough to have killed a man under ordinary circumstances) to produce intoxication, which only lasted about four hours. During my intoxication I vomited freely; soon after my recovery from this state I removed the ligature and applied a large poultice of pulv. sem. lini. That afternoon I took ammonia internally and some pills composed of mass. hydrarg. et colocynth comp., to act as a cathartic. In the evening the pain in the axilla and finger was very severe; took pulv. Doveri, gr. x.

Thursday, 18th. I passed a restless night without sleep, although during the night I took at least pulv. opii, gr. iv. This morning the pain in my finger is intense, and a well-marked line of inflammation extends along the arm to the axilla. I had the entire arm and hand painted with tinct. iodine, and the flaxseed poultice renewed; commenced taking a solution of iodide of potassium as an alterative. The pills not having operated I took pulv. Seidlitz, which had the desired effect. Diet, boiled rice. Several times to-day I tried to walk across the room, but each time would be seized with nausea and commenced vomiting. Took at bedtime pulv. Doveri, gr. x.

Friday, 19th. I rested pretty well last night, but this morning my hand and arm, and the glands in the axilla, are much swollen and very painful.

Repeated tinct. iodine. Diet, boiled farina. Took on retiring pulv. Doveri, gr. x.

Saturday, 20th. Passed a tolerable night, but my back is getting very sore, as the blankets on the stone floor make rather a hard bed. This morning the

pain is very great, and the swelling down my left side as far as my hip. Renewed tinct. iodine. I am still attacked with nausea and vomiting on my attempting to walk.

I removed the skin from off my finger, and it discharged freely a watery sanguineous fluid without smell. The nail is becoming loose. The broad red line following the course of the lymphatic, is now filled with a yellowish serum. The point where the fang entered, for three-eighths of an inch in diameter, is of a dark brown color. Renewed the poultice. At bedtime took mass. hydrarg. gr. v.; pulv. Doveri gr. x. Continued potassii iodid. Diet the same.

Sunday, 21st. Passed a restless night, being much troubled with colic; took magnesia calc. et. spts. menth. pip., which relieved me, and not having my bowels open took pulv. Seidlitz, which had the desired effect. Hand much swollen and filled with serum. Diet as usual.

Monday, 22d. Passed a comfortable night. The swelling has left my side and arm, but little remains in the hand. I can now walk a few yards without being seized with nausea; have been sitting up the most of the day. Continued potassii iodid. Diet, mutton broth and farina.

Tuesday, 23d. I awoke this morning much improved, the swelling and pain having left, with the exception of the finger, the first and second joint of which does not present a healthy appearance, the palmar surface having the appearance of gangrene, but the discharge is thin and watery, without smell. The granulations do not present a healthy appearance, they are rough, and many of them look as if they were sprinkled with yellow ochre. The nail is quite loose. Continued potassii iodid. Diet, mutton broth, with a little of the ment.

Wednesday, 24th. This day we commenced our march. I placed my hand in a sling and mounted my mule; found myself rather weak, and the mule hard to manage with but one hand; the sun was rather hot; this, with the jolting of the animal, caused me to suffer considerable pain; fortunately for me, after doing six miles, we encamped. I removed the nail. From this time on the finger gradually improved. I continued renewing the poultice daily until the last of October. In the meantime there was a large slough, which gradually came away and left the last phalanx exposed in two places. The granulations required occasionally the application of nitrate of silver. After this I made use of dressings of cer. simplex. Continued carrying my hand in a sling until the middle of November. A new nail commenced growing and a sinus remained open in the end of the finger; upon the introduction of the probe into the latter, the bone could be felt quite rough. A discharge from this kept up until about the 7th of February, when I removed the exfoliation of the end of the phalanx, showing evidently that the fang had entered the periosteum. Soon after this the sinus closed, leaving the finger in a deformed state, anchylosis having taken place in the first joint. The circulation is very imperfect, one of the arteries being destroyed, which renders it very susceptible of cold. The insertion of the flexor muscle has also been destroyed.

I have heard of a number of instances of rattlesnake bites, in all of which the patients recovered if they succeeded in producing intoxication.

CASE III. *Bite of the rattlesnake; recovery attributed to brandy.* By Harvey Lindsly, M. D., of Washington City. Stethoscope, 1852.

I have recently seen a paragraph in several newspapers, giving an account of two or three boys who were bitten by a venomous snake, and were relieved by drinking freely of brandy or whiskey. This reminded me of a similar

striking case, which came under my own observation, in this city, about two years since, which I have hitherto neglected to bring to the notice of the profession. It involves a question, however, of such great practical importance, that it seems to be the duty of every physician to make public all facts of which he may be cognizant, that have any bearing on the subject.

If alcohol really be a remedy, as these cases seem to prove, for the poison of the rattlesnake and other venomous snakes (and possibly of all poisonous reptiles), its general adoption in practice would be the means of saving annually a great many valuable lives. It is a remedy always at hand, and one which the most ignorant can readily administer. A short time since, a physician in New York, of high standing, though attended by medical men of eminence, lost his life from the bite of a rattlesnake.

In the autumn of 1850, a carriage drove up to my door about eight o'clock in the evening, containing four or five men, one of whom requested me to come out and see a patient they had brought for me to examine. I found him fast asleep, and, as they informed me, in a state of stupid intoxication. They said that about an hour and a half or two hours before, this man was exhibiting to his fellow-soldiers, at the United States arsenal in this city, a rattlesnake which he had brought with him from Florida, when the animal suddenly thrust his head out from the box in which he was kept, and bit the man in the hand. The occurrence immediately gave rise to great confusion and alarm; and the surgeon living some two and a half miles from the post, they were at a loss to know what to do. It was soon decided, however, that they should go to the nearest grocery and try the effects of alcohol. They accordingly gave him a large quantity of *brandy, more than a pint*, as they informed me. They then placed him in a carriage, and brought him to my house. Upon examination, I found him so thoroughly intoxicated, that it was impossible to rouse him; and thinking that they had already adopted the best possible remedy for the case, I directed them to take the man to his quarters again and send for the surgeon of the post, who might resort to such local treatment as he thought best. I did not see the man again, but was informed afterwards, that though very ill that night from the effects of the large quantity of brandy he had taken, he did not then or subsequently suffer in any way from the bite of the rattlesnake. Have any of your readers, Mr. Editor, met with a similar case?

CASE IV. *Death in Rouen, from the bite of a rattlesnake, inflicted in mid-winter, in eight hours and three-quarters after the accident.* By M. Dumeril. Report to the Royal Institute of France. *Lancet*, 1827, vol. xii.

M. Dumeril made, in the name of the Academy, a report on the event which happened at Rouen, last February, to Mr. Drake, who had brought from London, with other animals, three rattlesnakes. All our readers must have learned this event by the daily papers; the following, however, are some authentic details, which the Minister of the Interior communicated to the Academy on this subject. On his arrival at Rouen, Mr. Drake, who had taken the greatest precautions to preserve his animals from the effects of cold, observed that the finest of his serpents was dead, and withdrew it with the tongs from the cage in which the others still were. These appeared to him languishing, and he took them into one of the rooms of the inn, near a stove. Still observing that one of them gave no signs of life, he moved it with a stick, and, afterwards, had the imprudence to open the cage, and to take the snake by its head and tail, in order to be assured that it was really dead. But the animal, which was only benumbed with the cold, folded on itself, and suddenly bit Mr. Drake on the back and outer part of the left hand.

Mr. Drake uttered a cry, but he had the courage, however, not to leave the animal, and placed it in its cage, in order to prevent the occurrence of similar accidents to others; at this instant, he was again bit on the palm of the same hand. He immediately sent for a medical man, searched for water, and not finding any at hand, he rubbed his hand on a piece of ice which he found at the door in the court of the inn. Two minutes after, he strongly bound his hand above the wrist with some string. Then M. Pihorel (the gentleman sent for) arrived, who immediately cauterized the wounds with the ferrum candens. After this operation, Mr. Drake, whose agitation was considerable, became tranquil; he drank half a glass of olive oil, and appeared more tranquil. But alarming symptoms soon appeared, and he died eight hours and three-quarters after the accident.

Inspectio Cadaveris.—The external part of the body did not present anything remarkable. All the organs were sound; a little redness was observed in the membranes of the brain and spinal marrow, and a great quantity of coagulated blood was found in the veins of the bitten side. The surgeons who made the inspection, proposed for the future, in order to avoid all accidents, that the persons who wished to exhibit venomous serpents to the public should be obliged to draw the *fangs*, and that they should be constantly supplied with cupping glasses, and the necessary instruments, in order to perform immediate cauterization.

The Reporter proposed, in the name of the Commission, to adopt these measures, but thought that it would be necessary to renew, every two or three months, the drawing of the fangs, as they grow very fast. He then mentioned suction of the envenomed wounds as the most efficacious remedy, and related that suction is unattended with danger, provided that the mouth and the upper parts of the alimentary canal be not ulcerated.

M. Magendie thinks that it is important also to apply immediately a ligature above the bitten parts, in order to hinder the further absorption of the poison; and the reason it did not succeed in Mr. Drake's case was, its bad application, he being too much frightened to apply it sufficiently tight. Several members asked if it would not be prudent to prohibit the public exhibition of venomous serpents.

M. Geoffroy St. Hilaire declared that the rattlesnake is so venomous, that one of the gentlemen pricked his hand eight days afterwards with a scalpel which he had used whilst dissecting the snake which had bitten Mr. Drake, and that the puncture was followed by the most serious symptoms.

M. Dumeril stated that the symptoms produced by the bite of a rattlesnake are not nearly of so serious a nature in America.

M. Bosc confirmed this opinion, and stated that he had seen several persons who had been bitten by the rattlesnake in America, but who perfectly recovered; a horse, however, died from a bite on his tongue.

After this discussion, the Society decided that the report should be sent to the Commission, to be there modified as it should think fit.

CASE V. Bite of the cobra di capello or hooded snake; recovery attributed to ammonia. By Wm. Chalmers, M. D., lately in the Bengal Service. Glasgow Medical Journal, 1853.

On the 25th of June, 1819, at 11 P. M., I heard from the outside of my house, at Barrackpore, near Calcutta, a loud call for my immediate attendance. It proved to be from Colonel, afterwards General Sir Wm. Lamley, whom I found with a lantern in his hand, entreating me for God's sake to come with him at once, as his *mehrturanee* (female sweeper) had been bitten by a cobra di capello. I took in my hand a phial of solution of ammonia, of the usual

strength, a case of scalpels, and a large sized elastic-gum male catheter. On arriving at the hut occupied by the poor woman and her husband, I found her stretched outside on the ground, her head resting on her husband's knee. Her body was cold and collapsed; there was neither breathing nor pulse; her eyes were wide open and insensible to light; the mouth was also wide open; tongue cold; in fact life was, to all appearance, extinct. How long she had lain in this position could not be ascertained; her husband conjectured an hour at least. On the back of the right hand were discovered two punctures, as if made by a needle, about an inch and a half apart, marking the entrance of the poisonous fangs of the snake. Upon each puncture there was a drop of nearly colorless fluid, without any hemorrhage, tumefaction, or ecchymosis.

Here was a case sufficiently discouraging, if not, to all human appearance, hopeless. However, I resolved not to abandon the poor sufferer, while the kind-hearted master entreated me to do what I could.

Ordering bricks to be heated for application to the præcordia and the feet, the first step of the treatment was to pour down her throat a teaspoonful of the ammonia, with as much water, but all power of deglutition being lost, some difficulty was experienced in accomplishing my object. By the aid, however, of the catheter as an œsophagus tube I succeeded admirably. The next step was to cut out and pare off the integuments and subjacent areolar and muscular tissues, extending my incision about one-fourth of an inch beyond the punctures. From the large wound, which was of an oval shape, not a drop of blood escaped in this operation. The husband was now directed to apply his mouth to the wound, and suck with all his powers, which he proceeded to do most readily, the natives having great faith in such a measure. This he continued, with all the energy he was capable of, for fully half an hour, without succeeding in procuring any moisture, while I *repeated the ammonia* steadily every ten minutes, *till a full ounce was consumed*. At length our perseverance was rewarded by some hopes of a restoration, for the poor distracted husband leaped up in ecstasy of joy, exclaiming in his own language, "*Kohoo àtá sahib*," (blood is coming, Sir), showing his tongue covered with the vital fluid. In a few minutes more the action of the heart was faintly perceptible; the pulse at the wrist was just traceable in a thready thrill; she moved her head, gave a deep sigh, and sat up. Thus our persevering efforts for nearly two hours were rewarded by the rescue of a fine young healthy woman from certain death; in truth, her recovery might be considered, without any hyperbole, a resurrection from the dead. The only treatment pursued afterwards was the free cauterization of the wound by *nitras argenti*, the application of a pledget of lint dipped in melted *ceratum resinæ*, and covering the whole with a *hot poultice*. The wound healed kindly by granulation, and she was able to resume her duties in a few days.

CASE VI. *Speedy death from the bite of the hooded snake, in London.* By Prof. Quain, of the University College. *Lancet*, 1852.

The recent melancholy case runs as follows: The patient was a strong, well-made, and healthy man, about thirty years of age, who met with an untimely end by his own rashness. He was keeper of the serpents at the Zoological Gardens, Regent's Park, and in a state of inebriety, early on the morning of the 20th of October, he took out the cobra, and put it around his waist. After the reptile had coiled round his waist, it came out behind; when taking hold of it about a foot from the head with one hand, and with the other lower down, he held it up in front of his face. The animal then flew at him, and bit him at the root of the nose. The patient immediately saw the whole extent

of the danger, and ran towards a person employed in the gardens, with his arms outstretched and blood on his face, begging for medical assistance. He then went to the sink and washed his face. No attempt at sucking the wound, using the actual cautery, or strong caustic, was made at that period.

When brought to the hospital, about forty minutes after the accident, the patient's face was slightly livid; the respiration imperfect; he walked with difficulty from the cab to the ward; and pointed to his throat as the seat of pain. He could not speak, had difficulty in standing, and was unable to swallow. The fangs had wounded the right side of the root of the nose, between the nasal bone and the inner canthus of the eye, where three punctures were apparent just over the angular vein, and the teeth had made some scratches on the left side upon the corresponding parts. There was no swelling, but the upper and lower lids of the right eye were of a pinkish red. Artificial respiration was resorted to for fifty minutes, and, subsequently, galvanism; but stupor rapidly followed upon faintness, paralysis of the extremities set in, and the patient died in a comatose state fifty-five minutes after admission.

The *post-mortem* examination took place sixteen hours after death. Externally there was more ecchymosis than is generally the case, especially in the face and at the back, from the nape of the neck to the calves of the legs, excepting the gluteal region; the purple color being more uniform and less mottled than usual. On dissecting off a portion of the skin over the angular artery and vein, between the root of the nose and the inner canthus of the eyes, the areolar tissue was found strongly ecchymosed. Frothy mucus had escaped from the deepest wound on the right side, between death and the *post-mortem* examination. The general characteristic of all the viscera—lungs, liver, heart, spleen, kidneys, etc. etc.—was very intensely marked congestion; but the degree was different in the several organs. The spleen, for instance, when cut into, looked exactly like a dark clot of blood; the same may be said of the posterior part of the lungs; the other viscera were gorged in a less degree; the brain was, however, far from presenting the same condition as the other organs, for the congestion was not so considerable. The right cavities of the heart were rather distended, but the left somewhat contracted. The spinal marrow was taken out, but it presented no features of pathological interest, saving that the medullary structure was perhaps softer than usual. The blood was altogether dark, alkaline, fluid, and it emitted a peculiarly sour and sickly smell, quite different from the odor ordinarily known to pervade the dead-house.

Unfortunately for the patient, the fangs were implanted exactly over the angular vein, and it is probable that the poison was immediately instilled into that vessel, and thus at once admitted into the circulation. Had a finger been bitten instead of the face, perhaps constriction might have prevented the fatal results. Nor should it be forgotten that cupping-glasses, or sucking, should be resorted to when such cases are seen immediately after the accident. The symptoms which were manifested upon the patient's admission (forty minutes after the infliction of the injury), were not those of pure asphyxia, nor produced by intense congestion of the lungs; but the poison, whatever may be its nature, by circulating through the system, must have acted at first upon the medulla oblongata, and paralyzed the muscles of respiration. The patient had not, on his admission, lost the power of voluntary motion, for he freely moved his arms, and pointed to his throat as being the seat of pain and difficulty. But he could not speak, and the breathing was of a gasping character, showing that the muscles of respiration were powerless, whilst the brain and intelligence were yet in a normal state. In fact, the effect of this morbid poison seems to be very much like that produced by the ingestion of hydro-

cyanic acid. Mr. Marshall (assistant surgeon to the hospital) tried the blood in the dead-house with hydrochloric acid, and found that some vapors of ammonia were evolved.

CASE VII. *Cure, from ammonia in water, after bite of the cobra di capello.* By Dr. Mac Rac, himself the patient, lately in the East India Company's Service. *Lancet*, 1852.

I directed a teaspoonful to be given me of the *spiritus ammoniæ compositus*, in a Madeira glass of water. Finding the first dose agreed with me, in five minutes or less I took a second, and so on, a third, fourth, fifth, and sixth, when the medicine began to have a favorable effect. The first benefit I was sensible of deriving from it was a relief from the sickness at the stomach; my breathing next became easier, my skin began to recover its natural warmth, and the perspiration, with which I had been in a manner drenched, dried up by degrees. I still went on with the medicine, but at longer intervals, for every now and then I had a slight return of the oppression in breathing, which was immediately relieved on taking the alkali. I had thus gone on until I had taken *thirteen spoonfuls*, or a wine-glass full, of the medicine before I considered myself as out of danger; and in proportion as I recovered, I became more and more sensible of the nauseous taste of the alkali, which latterly seemed to burn my throat as I swallowed it, though I could scarcely perceive the taste of the first dose I took, so totally or nearly gone was the nervous sensibility of my palate. In the course of three hours from my receiving the bite, I was out of danger.

CASE VIII. *Cure of glanders in man.* *Lancet*, 1843, vol. xliii.

A wagoner, nineteen years of age, entered the Hôpital de la Charité, in Paris, on the 18th of October, 1841. He complained of having felt ill for the week preceding, without being able to specify any particular seat of disease. Soon intense pains were felt in the ankle and knee-joints, and the muscles of the leg and thigh, though unattended with swelling or redness. His pulse became quick, thirst intense; headache and prostration. On the 25th of October pustules, filled with purulent matter, appeared on the instep and upper surface of the three smaller toes of the left foot. These pustules broke, and cicatrization was completed in a few days; but a diffused swelling now made its appearance in the anterior part of the superior third of the thigh, followed by two similar tumors, one in each leg. M. Monneret, under whose care the patient was placed, now suspected the nature of the disease, and ascertained that one of the horses kept in the stable where the patient had been sleeping actually had glanders. For the eight months ensuing tumors of a similar kind to the foregoing were successively and incessantly appearing on all parts of the upper and lower extremities, though they continued one after another to disperse, and nothing in the general condition of the patient, except his emaciation, gave cause for alarm; yet one curious collateral circumstance is stated: Early in December, 1841, a horse being inoculated with the matter from one of the abscesses, died in the course of five days, without, however, presenting during life any of the ordinary symptoms, or after death any of the usual morbid appearances belonging to the disease.

The treatment of the patient was the same nearly throughout, consisting chiefly of decoction and extract of cinchona in large doses, with wine.

On the 5th of July, 1842, iodine, with iodide of potassium, was administered. This was followed by an attack of erysipelas in the left arm, and the iodine was suspended, to be resumed on the 17th. No new tumors had appeared during the previous two months; the cicatrization of those still ex-

isting was soon afterwards completed, and the patient was discharged perfectly cured on the 31st of July.

Andral, and other able pathologists who saw this case, were unanimous in pronouncing it a true instance of glanders. The journal from which we have extracted the above relation says: "The case is unique. In all the instances of glanders in the human subject reported hitherto, the disease has proved fatal."

CASE IX. *Bite of a viper on the tongue; tracheotomy; patient saved.* Lancet, 1840, vol. xxxviii.

A man who, from his youth, had been accustomed to catch and tame vipers, brought two, on the 24th of March, to a shopkeeper. While playing with one of the animals, he put it in his mouth, and was immediately bitten by the viper, in consequence of a bystander having pinched its tail. The tongue at once became enormously swollen, and during the night the man could hardly breathe. A medical man was sent for on the next day, and found him in a very dangerous state; the face swollen and anxious; the salivary glands tumefied; the tongue enormously swollen; and the pulse small. The tongue was immediately scarified, but the swelling soon returned again, and, as the man was about to repair to the hospital, he fell on the ground in a state of asphyxia. The respiration and pulse were now completely suspended; the face became purple, and the neck swelled to such a degree, that its circumference exceeded that of the head. The operation of tracheotomy was at once had recourse to, and the patient was bled; the blood, at first, flowed slowly, but, after some time, the respiration became more regular, and the tumefaction of the neck was diminished. The man was now placed in bed, and thirty drops of the liquor ammon. acetatis were administered by means of an oesophagus tube; the neck was rubbed with volatile liniment, and sinapisms were applied to the neck and legs; the tongue was again scarified, but, as little blood came away, sixteen leeches were applied to the neck; the patient also took a drachm of nitre, and a lavement containing two ounces of vinegar. He slept during a part of the night, and in the morning found himself something better, although the tongue was still blue and swollen. On the third day after the operation the tongue had nearly recovered its natural state, and on the 19th day the man was dismissed, perfectly cured.

CASE X. *Bite of a spider on the glans penis, followed by violent symptoms.* By Isaac Hulse, M. D., U. S. Navy. American Journal Med. Sciences, 1839.

On the 7th of August last, Mr. Q., of this place, while in the privy, perceived himself to be stung by a spider on the glans penis. The pain, which was not great at the moment, continued to increase till 1 P. M., an hour after the accident, when it had become extreme, and I was called to see the patient. I found him lying upon a cot, and writhing under the most acute suffering. The place where the sting was made, showed no marks of irritation nor swelling. I, however, applied to it a strong solution of carbonat. potass. which I happened to have about me, and ran to the apothecary's for medicine. My absence lasted but a few minutes, and on my return, I found him vomiting with great violence, and complaining of deep-seated pain in the abdomen, extending up into the chest, and of sensations of choking and suffocation. The vessels of the neck and face were greatly distended, and of a dark hue. I opened a vein in the arm, and let blood copiously through a large orifice, and commenced immediately to give aqua ammoniæ and laudanum in doses of a teaspoonful of each every ten minutes, which were ejected

as often from the stomach; pains and spasms along the spine and extremities now came on, and the agony and anxiety were, if possible, increased. Strong volatile liniment, tinct. cantharidis, and ol. terebinth. were alternately applied to every part of the body by the patient's numerous friends who had assembled round him, and common injections were administered as frequently as they conveniently could be, with a view to open the bowels. The ammonia and laudanum were assiduously plied, and occasionally some tinct. camphoræ, likewise; at the suggestion of Dr. Edwards, of the navy, who was called in, the oleum olivæ was freely administered. At 3 P. M. the paroxysms of pain came on at longer intervals, and the vomiting was less urgent, but the intensity of the pain, when present, was undiminished. The principal medicines relied on, viz., the ammonia and laudanum, were continued every half hour, and at about 5 o'clock, after the exhibition of fifteen injections, fecal evacuations were obtained from the bowels. The patient became much easier in the course of the evening, and was able to retain a dose of castor oil, which purged him freely; but the pain in the legs continued through the night, which he passed without sleep.

On the subsequent day sinapisms were applied to the legs without effect, and the evening brought little or no mitigation of the pain. Veins were now opened in both feet, which were placed in warm water, and the blood was allowed to flow till an impression was made on the pulse. In an hour after the bleeding, the patient enjoyed perfect ease; he slept well that night, and on the following day was able to walk about the house. He recovered in health very speedily.

This gentleman is of dark complexion, short stature, and powerful muscular development.

I saw several spiders in the place where he received the sting. They were of large size, of a dark brown color, covered with hairs over the legs and body.

In this case four ounces of laudanum and an equal quantity of aqua ammonia were administered in the space of four hours.

Pensacola, Feb. 2, 1839.

CASE XI. *Fatal dissecting wound.* Lancet, 1826, vol. i.-ii.

A few days since, a surgeon died from a wound received while engaged in dissecting a subject. It occurred at Bath. A drayman picked up a large needle, and stuck it into the breast of his smock frock. While afterwards engaged in his labors, a cask or something came against the drayman, and forced the needle into his person with so much force, and to such a depth, that it could not be extracted, nor could the unfortunate man pursue his work. Slight as the cause was apparently, this accident occasioned the man's death; he soon became seriously ill, and no art could extract the needle or save the individual's life. After his death the assistant-surgeon was desirous of dissecting the body, and particularly of ascertaining the situation of the needle, which had produced mortification and death. Of course, the part surrounding the needle was the most important object of dissection; and while engaged in dissecting such portion of the body, the assistant-surgeon rather slightly cut his finger. This wound could not be cured; in two days, the left arm swelled considerably, and in a day or two afterwards mortification ensued, terminating in death.

CASE XII. *Speedy death from a dissecting wound.* By W. D. Purple, M. D., of Greene, New York. New York Journal of Medicine, 1852.

On Thursday, the 10th of June, Dr. Spencer performed a post-mortem ope-

ration on the body of Mrs. Rich, who had been in feeble health with disease of the lungs for some months. About ten days previous to her death, more active symptoms confined her to her bed. Her symptoms before death, and ocular demonstration after, evinced extensive disease of both lobes of the lungs, and inflammation of the serous membranc. The cavities of the chest and abdomen were filled with a sero-purulent fluid, and a diffuse cellular inflammation was apparent. There was no erysipelatous affection of the skin, nor any other symptoms or appearances that are not presented in such diseases in our most respectable families.

The autopsy was performed twenty-four hours after death. While in the act of closing the first incision with a needle, the doctor slightly pricked the thumb of his left hand. The wound was very slight, and did not bleed; on examining it nothing could be seen or felt, and he came to the conclusion that it might have been merely imaginary, and nothing further was thought of the matter, until about twenty-four hours after, when he discovered a slight irritation at the place. He continued in active labor during the day, and towards evening was taken with a chill, with a sense of soreness over the whole body. The thumb became painful, and a reddish pustule of three or four lines in diameter appeared; dyspnoea soon supervened; this was accompanied by a depressed typhoid pulse, headache, and nausea. On Saturday, an erysipelatous redness, with great tenderness, presented itself below the axilla on the left side, and after two days it had extended to the groin. The difficult breathing and the pustule had entirely subsided on Sunday. The hand and arm were entirely free from pain, and only a scabious surface was left upon the thumb. On Monday, the right foot and ankle assumed a reddish flush, and became painful. On Tuesday the pain had subsided, and the nervous system became entirely under the control of the animal poison; stupor succeeded, and he could with difficulty be aroused to consciousness. On the eighth day after the wound he expired. It is proper to observe that there was no evidence of diseased lymphatics of the arm, nor was there any enlargement or tenderness of the glands of the axilla or groin.

The treatment he received was such as authority recommends. The poison had been generally diffused throughout the system before it attracted attention. The external application of nit. of silver and tr. iodine, with alteratives and stimulants internally, were freely resorted to. Anodynes to allay the irritation of the nervous system were not neglected. But all in vain. Death had marked him as his victim, and with an unerring shaft.

SECTION IV.

DESPERATE OPERATIONS.

CASE I. *Account of a surgeon who cut himself successfully for stone in the bladder.* By M. Clever de Maldigny, late Assistant Surgeon, Royal Guards of France. *Lancet*, vol. v.-vi. This is his own account of the operation:—

Fixed in my resolution, after having made the necessary preparations, I placed myself before a looking glass; I raised the scrotum with the left hand, which stretched at the same time the skin of the perineum, and at that part where the operation for the stone is generally performed, I forced in perpendicularly the point of a bistoury, until it came against the stone, which was inclosed in the neck of the bladder. This puncture made, I rested a few seconds; then I enlarged the opening in the integuments, and carried my finger into the wound, thinking to touch the stone, but the point of the bistoury had only divided the part sufficiently far towards the exterior, and there-

fore the division was not perfect. After a momentary repose, I carried the instrument again into the wound, and completed the section. Then with my index and little finger I searched for, and soon succeeded in extracting, a calculus of about the size of a large nut. The operation over, the urine flowed in abundance. I dressed the wound with lint, dipped in an emollient decoction; being perfectly relieved from my pain, I fell into a sound sleep. On the following day I was as tranquil and cheerful as if I had never suffered.

Many physicians, my friends and colleagues, and a great many persons whom I do not know, surprised at such news, flocked to my house to assure themselves of a fact which appeared to them truly astonishing. Professor Beclard has himself honored me with a visit, and examined the stone.

CASE II. Account of a man who suffered a rattlesnake to bite him under the vain hope of its curing leprosy and elephantiasis; death. By R. Whitmore Clarke, Assistant-Surgeon, R. N. *Lancet*, 1838, vol. xxxv.

Masianno Jose Machado was bitten by a rattlesnake, for the express purpose of being cured of elephantiasis and lepra. The individual who made this experiment was a white man, about 50 years of age, of ordinary stature, stout, and rather athletic; temperament, sanguineo-bilious. The kind of elephantiasis with which he was affected, was that denominated by Alibert, E. leontina; it was in its second stage, and, according to the patient, no energetic measures had been employed in its treatment. Nearly all his body, as well as extremities, was insensible exteriorly; the cutaneous tissue was thickened, hard, its surface rugous, covered with tuberculous elevations, but none of them were ulcerated. Some pustules under the arms had a porriginous appearance. The characters of the disease were more apparent and better developed on the face, the features of which were swollen, giving a disagreeable aspect, without, however, rendering it altogether hideous. On the extremities the skin and nails had begun to change in appearance, and the fingers and toes were altered in form. Whilst life and sensibility appeared almost extinct on the surface of his body, his interior yet retained the remains of his former energy, and he possessed a force of mind by no means common, and seldom found in one of his sad condition. Six years of dreadful and incurable disease, and four of seclusion in the hospital for lepers, had made him look forward to death as the only termination to his sufferings. No danger counterbalanced, in his idea, the desire he felt to be freed from his disease; he willingly risked the remainder of a life, under its continuance, for the slightest probability of recovery, and no stoic ever expired more undaunted and indifferent than he did when aware of the fatal effects of his experiment. No opinion had the least weight against the determination he had taken; nothing intimidated, nothing deterred him. Having obtained leave to quit the Lazarus Hospital, he resolutely repaired to the house of Sen. Santus, physician to the hospital, to offer himself to the fangs of the venomous reptile, whose bite sometimes destroys life in a few instants, causing, immediately, tremors, convulsions, and the blood to issue from the different outlets of the body, and even from the pores of the skin. Having signed a declaration that the act was voluntary, and that he himself was alone responsible for its results, he boldly introduced his hand into the cage of the deadly reptile; it, at first, appeared to avoid him; he advanced his hand towards the snake; it looked inoffensively at him, and began to lick his hand. Two minutes passed in this repugnance on the part of the reptile to bite him. He now provoked the serpent, and seized it in his hand forcibly, and it bit him between the articulations of the ring and little fingers with the metacarpus. The bite was inflicted at 50 minutes after 11 o'clock in the morning of the 4th of September.

He felt no pain when bitten, nor effects from the poison introduced into the wound; he only knew that he was bitten when it was announced by the bystanders.

His hand was immediately withdrawn from the cage; it swelled slightly, and a few drops of blood escaped from the wound, but he felt no pain. The man continued perfectly tranquil; respiration natural, and his pulse regular. Five minutes after the bite, a slight sensation of cold in the hand.

12, noon. Slight pains in the palm of the hand, which increased after some minutes.

17 minutes past 12, noon. The pain extended to the wrist.

20 m. The hand swelled considerably.

30 m. The pulse became fuller. The patient all this time conversed in a lively manner, and even laughed.

50 m. A sensation of fulness in the course of the jugulars; some alteration in vision; formication in the face.

55 m. The sensation of fulness extended to the sides and back part of the neck; the hand continued to increase in volume, and the pain extended two-thirds up the forearm.

59 m. Numbness over the whole body.

1 h. 20 m. P. M. Tremor of the whole frame; sensible to the touch.

36 m. Cerebral disturbance; pulse more frequent; some difficulty in the movements of the lips; somnolency; sensation of constriction in the throat; pain more intense, and extending over the whole arm; increased intumescence of hand.

38 m. Felt cold, and covered himself.

48 m. Pain in tongue and fauces, extending down to the belly; increased pain and swelling in hand; coldness of feet.

2 h. 5 m. Difficulty of speech.

25 m. Difficult deglutition; anguish; copious perspiration on the chest.

50 m. Arms powerless; some drops of blood from the nose; increased anguish and inquietude; pulse 96.

3 h. 4 m. General swelling; involuntary groans; sensation of sinking.

8 m. Pulse 100.

15 m. Great pain in the arms; restlessness.

30 m. Pulse 98; flushed face; continued bleeding from the nose.

35 m. Drank a little wine and water without difficulty; his shirt was changed, wet with perspiration; intense redness of the whole body; some drops of blood escaped from a pustule under the arm.

4 h. Pulse 100; redness of surface more intense, but of a darker hue, especially in the bitten limb; violent pains in superior extremities, preventing any rest, notwithstanding the exhaustion of which he complained; constriction of throat, and breathing embarrassed; inferior extremities and belly as yet not exhibiting any particular phenomena.

50 m. Pulse 104; great heat over the whole surface of the body; salivation.

5 h. 30 m. Pulse in same state; torpor. It is remarkable that the urine has all along flowed in great abundance; saliva viscid, of a dark color, and expectorated with difficulty; great muscular prostration; frequent groans, caused by pains over the whole body; respiration tranquil; pulse full; skin soft; increased tumefaction of bitten hand. In this state he continued till

7. P. M. Some disturbed sleep, with groans; he woke, and said he was free from pain in the arms, but had great pain in chest, and a feeling as of a knot in the throat; urine copious; deglutition very difficult; saliva viscous and white; sanguinolent fluid running from the nostrils; offered a drink of water with rum and sugar, which he could not swallow.

8 h. Sweating ceased; groaning not so constant.

30 m. Passed urine.

9 h. 10 m. Passed urine; ceased to groan.

15 m. Profound sleep.

10 h. Administered the infusion of guaco; dose, three tablespoonfuls, with one of eau-de-luce, which patient refused, and took the simple infusion; sanguinolent secretion from the nose stopped; pulse regular; diminution of the tubercular elevations of both arms and face, presenting an appearance of erysipelatous redness.

20 m. Patient passed about two ounces of tolerably perfect urine; remains more tranquil, and sleeps at intervals without groaning.

40 m. Pains in chest diminished; pains in legs and feet, in which, until this time, there had been a sensation of death-like cold; pulse regular, 108; thirst; patient drinks water without difficulty.

11 h. Takes four tablespoonfuls of infusion of guaco.

45 m. Emission of urine highly colored; drinks water easily by spoonfuls; pulse 119; the wounded hand and arm inflamed, and very painful; restlessness.

Midnight. Slept soundly, interrupted by eructations; pulse 112; passed urine.

30 minutes past 12. Patient very restless; his cries distressing; calls for religious consolation; refuses medicine.

40 m. Again passed urine; pulse 116; sensation of great heat in the legs; desires the coverlet to be removed.

1 h. Patient takes his medicine again; asks to be uncovered; passes urine; becomes more quiet.

15 m. Passes urine; pulse 100.

40 m. Takes a dose of infusion of guaco.

2 h. Drinks three spoonfuls of water; sits up in his bed; every time he drinks, pain and restlessness increase.

10 m. Passes urine.

30 m. Takes his medicine; becomes more tranquil.

3 h. Passes urine; the lower lip, which had been much swollen and inflamed, returns to its natural state; salivation ceases.

55 m. Passes urine, the quantity always from $\bar{3}$ ij to $\bar{3}$ ij; is more tranquil; takes his medicine; pulse 110; involuntary movements of right thumb and left leg.

4 h. Passed urine.

45 m. Takes a spoonful of medicine; pulse 100; patient tranquil, and sits up.

5 h. Passes urine.

30 m. Passes urine; patient declares himself in great agony.

6 h. Pulse 100; respiration free; frequent groans.

10 m. Passed urine.

9 h. 15 m. Great prostration; convulsive movements of the lower jaw, as also of the lower extremities; urine bloody.

10 h. Pulse accelerated and intermitting; increase of convulsions; diminution of swelling of limbs, and redness of skin; deglutition extremely difficult; respiration anxious. Applied blisters to the thighs; gave a spoonful of infusion of guaco.

50 m. Convulsions diminished; administered enema of brandy.

55 m. Cessation of convulsions.

11 h. Remains in same state. Gave an ounce of oil of Laga, which he swallowed with difficulty.

30 m. The patient expired.

In a few hours the corpse became livid and more swollen; at ten the following morning, eleven hours after death, the body was enormously increased in volume, and covered with red and livid spots, exhaling a fœtor so insupportable as to preclude the possibility of an autopsy, as we desired.

CASE III. *Establishment of an artificial anus.* By M. Amussat. *Lancet*, 1839, vol. xxxvi.

At a late meeting of the Royal Academy of Medicine, M. Amussat communicated the following remarkable case:—

Mrs. D., 48 years of age, had long suffered under constipation, severe pain on going to stool, and hemorrhage from the rectum; the bowels were evacuated only every seven or eight days. In the commencement of May last, Mrs. D. was treated by the author for a slight affection of the uterus, and was on the point of setting out for the country, when she was seized with obstinate constipation. Every remedy was now employed, but without avail. M. Amussat examined the rectum, but did not discover any obstacle in this part of the canal, nor any trace of fecal matter. Frequent consultations were now held with MM. Breschet, Recamier, etc., and it was, at length, decided to have recourse to an operation, the patient being reduced almost to the last extremity. The comparative merits of the different modes of establishing an artificial anus were now discussed, and Callisen's plan, as modified by M. Amussat, was selected. The operation was performed on the 2d of June, in the following manner: The patient having been placed on her abdomen, the trunk elevated on pillows, a transverse incision was made at two inches above the crista ilii, and over the prominence which was evidently produced by the left lumbar colon. This incision extended from the common body of the sacro-lumbalis and longissimus dorsi muscles to the middle of the crista ilii. The superficial fascia, dorsal, and external oblique muscles, were next divided in the same direction, and layer by layer; the internal oblique and transverse were next divided, and by crucial incisions. A small arterial branch was now twisted, and a layer of fascia divided by a crucial incision. This last exposed the fatty areolar tissue which lies immediately above the intestine; it was carefully removed by means of the curved scissors, and two ligatures were passed through the walls of the intestine, in order to keep it *in situ*, and prevent its retraction. The surgeon having distinctly recognized the colon *free to a considerable extent of peritoneal covering*, passed a trocar into the most prominent point of the intestine, on withdrawing which a quantity of gas and liquid feces escaped. The patient immediately felt much relieved. A bistoury was now passed along the canula, and the opening of the intestine freely enlarged in various directions. An abundance of gas and feces escaped, and when injections were thrown into the superior and inferior portions of the colon, three basinfuls of liquid feces came away. The orifice of the intestine was attached to the anterior angle of the wound by four sutures.

No ill effect whatever followed the operation. Its success was not compromised by the supervention of any local accident, and on the 18th of June last, that is, sixteen days after the operation, the patient was in the enjoyment of excellent health. Within the last few days she has resumed her ordinary occupation; and the feces are discharged two or three times in the twenty-four hours.

CASE IV. *Operation for strangulated hernia on both sides without strangulation existing in either, yet the patient was cured.* By M. Dupuytren. *Lancet*, 1841, vol. xli.

On the 27th of September, 1814, a man, almost in a desperate state, was

brought to the Hôtel Dieu; the extremities were cold, the visage pale, the pulse extremely small, and scarcely perceptible; the belly was tender, especially at the inferior part; hiccough, constipation, and vomiting of inodorous matters, existed; and to complete the case, the patient stated that two herniæ which had existed for a long time had become painful. Dupuytren, uncertain of the diagnosis, prescribed bleeding and lavements; the same evening an abundant alvine evacuation took place, others took place during the night; the vomitings ceased, and on the next day the pulse was found fuller, the face red, the abdomen pliant, and the intelligence sufficiently restored for the patient to be able to reply exactly to the questions put. He then said, that he had had two inguinal herniæ for eleven years, insufficiently restrained by a bad bandage; that in the evening, after an effort, they escaped out of the bag and became painful. He had reduced the right hernia, a physician had put back the left. The symptoms were aggravated, and therefore he was induced to apply to the Hôtel Dieu.

Dupuytren asked what was to be done. There was neither vomiting or constipation; nevertheless, there was the *greater part* of the symptoms of strangulation. He made the patient walk; the left hernia was reduced easily, and returned again as easily.

The same evening the hiccough, which had continued hitherto, ceased; the abdomen became soft, although still tender on pressure, particularly in the hypogastrium and the iliac regions. At this moment Dupuytren decided to operate, "*persuaded*," said he, "*that little inconvenience would be produced by the operation were he deceived, and great good if there were strangulation.*" He operated on the right hernia, there was no strangulation; he operated on the left, there was none either. The man got well; and Dupuytren observed, that "*it was very doubtful whether the two operations had not contributed to this fortunate result.*"

CASE V. *Ligature of the ulnar, radial, brachial, and axillary arteries for a wound of the palmar arch; recovery.* By T. C. S. Key, Esq., F. R. S. Lancet, 1855.

This case was that of a man aged 28, who, on the 3d of Feb., 1855, entered St. Bartholomew's Hospital for a wound in the palm of the hand, caused by a blunt knife on the previous 17th of January. The bleeding at the time of the accident was most profuse, and in the course of the night a ligature was placed around the orifice of a vessel. As the hemorrhage recurred, the radial and ulnar were tied about an inch above the wrist-joint. Eight days after this, blood in small quantity appeared in the ulnar wound, and a loose tourniquet was put around the arm. On the 12th of February, the tenth day after the artery was tied, the ligature separated from the ulnar, and hemorrhage followed it. This was now tied four inches above the wrist. Four days afterwards bleeding occurred from both ends of this artery. The patient was now reduced to a very low state, and had to be sustained by tonics and generous diet, and the brachial artery was now tied. After nine days' lull, bleeding once more commenced both from the ulnar and brachial arteries, where the ligatures had been applied to them. On the 18th of March the axillary artery was tied, but hemorrhage continued to return for several days, after which it was fortunately controlled by pressure methodically to the member, and by careful watching and good diet the man recovered; the 28th of May he was pronounced to be convalescent. Nothing is said of having tried forced flexion of the member, and why the roller was not early resorted to in this case.

CASE VI. *Subcutaneous section of forty-two muscles, tendons, and ligaments in the same patient.* British and Foreign Med.-Chir. Review, 1841.

On the 25th of this month, August, I made, in the case of a young man twenty-two years of age, the subcutaneous division of forty-two muscles, tendons and ligaments, to remedy a series of deformities of the trunk and extremities, induced by the active retraction of these muscles and ligaments. This series of operations required twenty-eight incisions of the skin. The following muscles, tendons and ligaments were divided: the pectoralis major, the brachial biceps on each side, the two pronatores radii teretes, the two radiales antici, two flexores digitorum sublimis, and the two palmares parvi; also the tendons of the ulnares antici, those of the palmares magni et parvi, and those of the abductores pollicis. Besides these muscles and tendons in the arm and of the elbow and wrist, the following also in both of the lower extremities were divided: at the knees, the sartorius, the biceps, the semi-membranosus, the semi-tendinosus, the rectus internus, the fascia lata and external lateral ligaments, and at the feet, the tendo-Achillis, the tibialis anticus, the extensor communis, the extensor proprius pollicis, and the peroneus anticus.

Voici! the immediate results of these operations: The patient experienced only *mediocre* pain and fatigue; he uttered no complaint during the performance of the operations, which occupied a full hour. Soon afterwards he fell asleep; and the following night and next day he remained quite tranquil. No sign of inflammatory action anywhere presented itself; and by the third day the twenty-eight wounds were completely healed. Surely such a case as the present must convince every one of the perfect innocuousness of the subcutaneous division of muscles and other parts.

CASE VII. *Ligature to both carotids in four days and a half for a gunshot wound; recovery.* By John Ellis, M. D., of Grand Rapids, Michigan. New York Journal of Medicine, 1845.

A man, 21 years of age, was accidentally shot with a rifle, the ball from which "struck him near the centre, and immediately above the spine of the scapula of the left side, passing out, after making a flesh wound of about two inches and a half, towards his neck, and after about the same space it entered his neck over the centre and posterior edge of the sterno-cleido-mastoid muscle, passing up through the centre of his tongue, and out of it to the right of the mesial line, struck the lateral incisor, cuspid, and bicuspid teeth of the right side, knocked them out, and the alveolar process external to them; passed then through the upper lip, leaving a ragged opening through it." Dr. E., who saw him a few hours after the accident, brought the edges of the wound in his lip together with adhesive plaster and two or three sutures and dressed the other wounds with cold applications. The patient suffered but little pain, but an entire inability to swallow, even liquids, which appeared to be owing to the injury and swelling of his tongue. At the end of three days, Dr. E. introduced a flexible catheter into the patient's œsophagus, and injected some water and nourishment; the next day the patient was able to swallow, with difficulty, some liquid, and soon afterwards regained his power of swallowing.

On the night of the seventh day, hemorrhage from the wound in the tongue occurred, which was subdued by compression of the carotid of the left side and the orifices of the wound. The following night the hemorrhage recurred, and was with difficulty restrained by pressure, which caused the patient considerable pain. Considerable blood was lost. Dr. E., with the assistance of Dr. Platt, ligated the left carotid artery below the omo-hyoideus muscle; "an operation attended with a good deal of difficulty, owing to the swollen

state of the parts, the necessity of keeping up pressure, the bad position of the parts owing to the necessity of keeping the mouth in a certain position to prevent his being strangled by the blood, and the necessity of operating by candle-light." No unpleasant symptoms followed the tightening of the ligature save a slight coldness on that side of his face and an occasional throbbing pain beneath the sternum, and in the direction of the ligated vessel. The patient appeared to be doing well until the eleventh day from the accident, when he had a return of hemorrhage, which was readily subdued by pressing upon the right carotid and the two orifices of the wound. There was a slight pulsation in the left temporal artery, the first felt since the application of the ligature. There was a return of the hemorrhage during the night and several times the next forenoon. He could not endure pressure upon the right carotid for any length of time, and it was necessary to depend upon pressure upon the two orifices of the wound, which caused a good deal of pain, especially in the direction of the ninth pair of nerves. He was becoming very restless under the pressure, and was very anxious to have something done to relieve him. With the assistance of Drs. Platt and Shepherd, Dr. E. applied a ligature to the right carotid, four and one-half days from the time the left was ligated. The operation was attended with no difficulty; the internal jugular vein overlapped the artery to some extent; the descendens noni and par vagum were found in their places. Two ligatures were passed beneath the artery, and then tied, one of them over a cork applied to the vessel. For convenience, he was kept in the sitting posture during the operation; when the ligature was tightened no disagreeable effects followed; no fainting; no bad feeling about the head; and all the perceptible change was a slight paleness, and a cessation of pulsation in both temporal arteries, and of the hemorrhage. In the course of the next hour, his pulse increased in frequency from 95 to 140, but soon came down to 110. No difficulty of breathing. The first ligature was cut over the cork and removed, the other tied, and the wound dressed with sutures and adhesive plaster. For the first twenty-four hours the patient remained comfortable, but at the end of that time a hacking cough and difficulty of breathing came on, with pain in the chest and heaviness; pulse 120, rather full, for his reduced state. Blood was taken by opening a vein in the arm, and by cupping; belladonna and tincture of aconite were used; under which treatment, the difficulty of breathing subsided; pulse came down in a few days to 80; neither of the wounds healed by first intention, but soon commenced discharging a healthy looking pus. The ligature to the left carotid came away on the 17th day, and that to the right on the 14th from its application. The wound on the left side continued to discharge for several weeks, when the portion of the artery between the ligature and wound sloughed and came away in three pieces at different times. The young man now enjoys comfortable health, and is attending to business. No perceptible pulsation can be felt in either temporal artery.

CASE VIII. *Lithotripsy performed on the same patient forty-eight times.* By Mr. Coulson, Surgeon to St. Mary's Hospital, London. *Lancet*, 1854.

Mr. Coulson exhibited the bladder taken from a man aged eighty-three, on whom lithotripsy had been performed forty-eight times during twenty years. Whether one or more fragments of the original calculus may have been left in the bladder, and became nuclei of secondary formations, or whether the bladder was at first completely freed, and the relapses depended on the same constitutional disposition which gave rise originally to the deposit of calculous matter from the urine, Mr. Coulson was unable to say. He did not see the case until the middle of last year. It cannot be denied that relapses oc-

cur more frequently after lithotrity than lithotomy. The patient, aged 83, on whom lithotrity had been performed, in the last twenty years, forty times, was sent by Mr. Wheeler, of Chelmsford, in May last, to Mr. Coulson, who at eight sittings crushed, without the least difficulty, a large lithic acid calculus, the detritus which came away weighing an ounce. The operations were not attended with any unfavorable symptoms, and on the 9th of June he returned home. Towards the end of the year, symptoms of vesical irritation returned, and Mr. Wheeler again sent the patient to Mr. Coulson, who admitted him on the 26th of November under his care at St. Mary's Hospital. He then complained of frequent desire to pass urine, and pain at the neck of the bladder and in the perineum after voiding it. The urine contained some mucus, but no pus, blood, or albumen. There was no doubt that either a portion of the original calculus remained, or a new calculus had descended. Four ounces of tepid water having been injected, the lithotrite was introduced, and passed over a calculus on the right side of the bladder, but by no manipulation or change of the posture of the patient could the stone be seized between the blades of the lithotrite, or the instrument be passed behind the calculus. The trial was made on two different occasions under chloroform by Mr. Coulson and others. As there were no urgent symptoms, it was determined to wait, but the man became impatient at the delay, and returned home on the 10th of December. He got cold, and died on the 30th of December. On examining the bladder, the capacity of which is small, there was seen on the right side, a little behind the prostate, a small, oval-shaped calculus, over which the bladder was contracted, so that a small portion of the stone only appeared. From its shape, the stone appeared to be a new formation, and not a fragment of the former one, although without a section this point cannot be determined with accuracy. Mr. Coulson said that this was the oldest patient upon whom he had performed lithotrity.

CASE IX. *Lithotomy; lateral and high operation simultaneously performed on the same patient; recovery.* By Wm. H. Gardner, M. D., of Woodsonville, Kentucky.

This patient was about 40 years old, a blacksmith by occupation. Had symptoms of urinary calculus for years, as the Doctor informed us in 1850, on our way to the meeting of the American Medical Association, at Cincinnati. He first performed the lateral operation, but finding the stone too large to be grasped in the forceps, he immediately resorted to the operation above the pubes, and extracted a very large mulberry calculus, being the handsomest specimen of the kind we ever saw, and weighing over eight ounces. This patient had a good recovery; the surgeon remarking he did not know but that the first opening into the bladder had prevented accidents from the second.

CASE X. *Lithotomy; lateral operation, no stone removed; high operation, calculus extracted.* By W. L. Atlee, M. D., of Philadelphia, Pennsylvania. New Jersey Med. Reporter, 1854.

May 22, 1848. I was called to see Mr. J. W., who was suffering from retention of urine, and with it the greatest agony. I introduced the silver catheter, and relieved him of a large quantity of offensive phosphatic urine, loaded with mucus. While the catheter was in the bladder I used it as a sound, but failed in discovering the presence of a stone. The history he gave of his case for several years before disclosed symptoms strongly characteristic of stone in the bladder. He had previously been sounded, but no calculus could be detected.

Next day, before the bladder was evacuated by the catheter, I made a very

careful examination with a long-curved sound. After a lengthy exploration, I at last succeeded in *rubbing* the point of the sound against a gritty body, which seemed to be *fixed* in the upper part of the bladder, inclining to the right side. It was impossible, however, to *clink* the instrument against it. I repeated this examination daily, sometimes failing, at others succeeding in detecting the stone, but at no time could I get any stronger evidence of its presence. The patient had lost all power of urinating, and the bladder had to be relieved by the catheter at the proper intervals.

June 1. I attempted the removal of the stone in the presence of Drs. E. A. Atlee, Darrach, Grant, Bowman, and McConoughy. I made the lateral section, used the straight staff, and entered the bladder with a probe-pointed scalpel. The perineum was very deep. On introducing my index finger through the wound into the bladder in order to *feel* the stone I could not find it. It was beyond reach. I now passed the other index finger into the rectum, but it was still beyond reach. Next I introduced the forceps and passed it over the whole interior of the bladder without being able to grasp it—yet, at times, I could feel the instrument rubbing against the stone at a point about three inches above the extremity of the finger in the bladder. After endeavoring in various ways, for about an hour, to dislodge the stone without success, I gave up all further attempts at that time. The patient was insensible during the operation, having been kept under the influence of the anæsthetic mixture of two parts of ether and one of chloroform, liquid measure, which I introduced to the notice of the profession. He recovered very well, but, of course, after the wound healed, he was in nowise relieved of his severe suffering.

Oct. 8, 1848. I again sounded the patient, and came in contact with the stone as before, and in the same location. The stone being encysted, and having been so far beyond the reach of the finger in the perineal section, I now proposed the high or hypogastric operation, to which the patient readily consented.

Nov. 11. Present, Drs. Grant, Darrach, Gilbert, Jackson, and Bowman. The bladder being fully distended, and the long-curved sound having been introduced, I made an incision about three inches long through the *linea alba* above the pubes, deepening the incision as I approached the symphysis. Having penetrated the adipose and muscular walls of the abdomen with the knife, I now made my way with the point of my finger through the looser tissues behind the symphysis. This was accomplished without wounding the peritoneum, which could be seen as it was reflected from the walls of the abdomen to the fundus of the bladder. Elevating this reflected portion of the membrane on the point of the finger, I exposed the anterior wall of the bladder below it, thus entirely avoiding the cavity of the abdomen. The exposed portion of the bladder was next raised on the point of the sound and perforated with the sharp-pointed bistoury, and the wound enlarged a few lines. On withdrawing the knife, I immediately introduced the index-finger, to survey the interior of the bladder, and very soon detected the location of the stone. It was, however, deeply imbedded in a cyst, from which it was impossible to dislodge it with the finger. To effect its dislocation, I introduced into the bladder a probe-pointed bistoury, and, guided by the point of the finger, I carefully passed it under the edge of the cyst, and enlarged the opening sufficiently to liberate the stone. Now seizing it with the forceps, I succeeded in removing a calculus over four inches in circumference.

Much the largest portion of this stone was as rough as a rasp, and this corresponded with the extent of the cyst, while the small portion which had been

exposed, was quite smooth. The chloroform mixture was used. The patient had a rapid recovery.

CASES XI.—XVII. *Reproduction of, and repetition of operations for, malignant disease.* By S. D. Gross, M. D., Prof. Surg. Jefferson Medical College. Transactions American Med. Association, vol. vi.

(1.) The first case which I shall relate is mentioned by the late Mr. Allan, of Edinburgh, and is one of the most remarkable on record. The patient, in 1805, at the age of twenty-three, observed upon his left hip a movable and elastic tumor, not larger than a hazel-nut. About five years afterwards, when it had attained the bulk of a child's head, it was removed by Mr. Newbigging; the wound healed kindly; and the man was apparently well. At the end of nine months, however, it began again to grow, and in seventeen months from the time of the first operation, it was cut out by Mr. Russell, the tumor being as big as two fists. The patient remained seemingly well for nine months, when the morbid growth returned, and gradually increased until it acquired the size of a very large mamma; the skin was much inflamed, and a part of the tumor was ulcerated, protruding a dark-colored sphacelating substance. Mr. Allan now removed it, along with the skin, leaving a raw surface of the diameter of the crown of a hat, which was completely cicatrized in a month. The disease was now apparently eradicated, for the man enjoyed good health, and resumed his work. In seven months, however, it again returned, and, growing more rapidly than at any former period, it attained in two months nearly the same volume as when last extirpated. Mr. John Bell was next consulted, and removed the tumor, now as big as the head of a child of eight years, along with a great portion of its integuments. The wound healed kindly, as before, and when it was reduced down to the size of a crown-piece, it was kept open as an issue, to invite a free discharge of matter. The health continued good till March, 1815, when the tumor showed itself a fifth time. In December it had acquired an extraordinary volume, and was the seat of a large fungus, resembling a cauliflower in appearance. This Mr. Allan destroyed by ligature in June, 1816, with partial recovery of the general health. A year subsequently, the tumor was of enormous dimensions, measuring three feet in circumference at the base; the discharge was very profuse, and the general health became so much impaired that the man died exhausted in January, 1818, thirteen years after the commencement of the malady, and nearly eight years from the time of the first operation. All the viscera were found to be perfectly sound, except the liver, the left lobe of which contained a few hard tubercles, about the size of barley-corns.

(1.) The next case has been furnished by M. Broca, and is, perhaps, still more extraordinary. It came under the observation of the late Prof. Blandin, the eminent Parisian surgeon. In this case, the patient had an encephaloid tumor, of the size of a turkey's egg, on the left side of the trachea, which, rapidly augmenting, threatened to destroy him in a few months. In 1844, when on the point of ulcerating, it was removed. The wound from the operation speedily healed. In five months, the disease returned, and a second operation was performed in August, 1844. Five months passed without relapse, when the tumor reappeared, and the knife was again used in March, 1845. The man now remained well for a whole year, when, rearing its head again, the morbid growth was extirpated in April, 1846. At the end of ten months it reappeared, leading to the necessity of a fifth operation, which was performed on the 23d of March, 1847. The parts were well in a few days; and for nine months the patient enjoyed an immunity from his tormentor.

The sixth operation was performed on the 2d February, 1849; but this time the wound united less promptly, and the cicatrization was not completed till the 23d of the month. In five months, the malady reappeared; the man came again to Paris, but finding that Blandin was dead, and being unwilling to intrust his ease to any other surgeon, he went home to submit himself to his inevitable fate. He lingered till the autumn of 1850; the tumor, in the mean time, forming an enormous mass, extending from the parotid gland to the clavicle. The signs of constitutional infection existed in the highest degree.

It will be perceived from the history of this case, that, counting the intervals between the relapses and the operations of which the poor patient was the victim, he enjoyed nearly four years of health. This period might, doubtless, have been augmented, had not the man abandoned himself to despair upon finding that his surgeon was no longer alive. "Is this case not sufficient," asks M. Broca, "in the existing state of the science, and in the absence of any specific remedies that may hereafter be discovered, to show that an operation for the removal of cancer ought always to be performed whenever it is possible to satisfy ourselves that there is no constitutional contamination?"

(3) The following case, related by M. Jobert, of Paris, illustrates this tendency to relapse when the cancer is situated near the eye. The patient, when first seen by this distinguished surgeon, in October, 1849, was forty-two years of age. Her health had been quite good till 1834, when she observed a small tumor under the right superciliary ridge, which, as it was the seat of severe pain, was removed in August of that year, when only the size of a grape seed. The wound promptly cicatrized. Between November, 1834, and April, 1835, a similar tumor was developed at the same spot, and was excised along with the lachrymal gland by Cloquet. The wound was healed in a month, and for two years the parts remained well. At the end of this period, while the woman was apparently in perfect health, three little tumors were observed at the old cicatrice, and gradually involved the surrounding structures. She bore her sufferings for three years, when, in 1842, extirpation was performed by Lisfranc. The wound healed in twenty-six days. She continued quite well for one year, when another little swelling appeared just above the lachrymal caruncle, which was afterwards removed by a young surgeon. After a respite of two years, the malady recurred at the cicatrice, and finally involved the eye. Having borne her sufferings for four years, she at length, in April, 1849, fell into the hands of Jobert, who extirpated the entire eye. Cicatrization readily occurred, but in three months the disease showed itself again, not at the original site, but in the orbital surface of the inferior lid. This, too, was extirpated in November, 1849, and the parts perfectly healed.

It will thus be seen that the poor woman, in this case, underwent no less than six operations; and that no effort was spared, as far as the knife is concerned, to relieve her from her persecuting malady. If, as the reporter observes, the resources of art were not as complete as might be desired, it cannot be doubted that they have secured to the patient a prolongation of her life, and several years of tolerable comfort. It is to be regretted that no mention is made as to the fact, whether these tumors were epithelial or cancerous. It is hardly presumable that they were of the latter character, inasmuch as the intervals between the relapses were, with the exception of one, unusually long, and inasmuch as the general health remained throughout unimpaired. It is equally to be regretted that we have no knowledge of the final result of the case.

(4.) The next case which I shall mention occurred in my own practice. The results have been already made known, in part, in the *Western Journal of Medicine and Surgery* for 1852. A man, aged 32, consulted me in April, 1851, for a tumor of the lower jaw, which he had first noticed three months before; it was firm, elastic, free from pain, of a pale red color, and attached to the gum and jaw, extending from the ramus to the first bicuspid tooth. Two operations had been already performed upon it, each being followed by rapid relapse. On the 27th of April I removed the parts, along with the corresponding portion of the jaw; and, early in September, he wrote me that the disease had returned. On the 24th of that month I operated upon him a second time, removing the whole of the new growth, which was about the size of a pullet's egg, and about three-quarters of an inch of the anterior extremity of the ramus of the bone, from which the diseased structure seemed to spring. On the 31st of August, 1852, I excised the ramus at the articulation, the disease having attacked its inferior extremity. The man remained well until the winter of 1853, when the disease broke out in front of the ear, and now forms a tumor of the size of a small fist. It is worthy of remark that the general health has been all along pretty good, and that the wound has always healed well after each operation.

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(5.) A most extraordinary instance of this tendency in cancer to relapse after excision, is mentioned by Prof. Sidillot, of Strasburg. It occurred in a woman, aged thirty-five, who had a cancer of the knee, which had been extirpated nine times. It was removed for the tenth time on the 15th of July, and, again returning about six weeks after, the thigh was amputated on the 6th of November. The limb remained sound, but the patient died, a year after the last operation, of cancer of the lungs.

(6.) The subjoined case, sent me by Dr. Alexander Barclay, of Newburg, Orange County, New York, is one of the most remarkable on record:—

John Noltz, aged 43, shoemaker, of a sanguineo-nervous temperament, applied to Dr. Barclay on the 23d of March, 1844, on account of a cancerous ulcer, involving two-thirds of the lower lip; its edges being everted, and its surface hard and irregular, accompanied with violent lancinating pains. The disease had been first noticed about three years ago as a wart, the origin of which was ascribed to the use of a tobacco-pipe. There was no enlargement of the ganglions in the neck or under the chin. The parts were removed in the usual manner, and the wound healed by the first intention.

The man applied again to Dr. Barclay early in December, 1845, on account of an immovable bony tumor of the lower jaw, extending from near the symphysis to the angle. It seemed to involve only the outer plate of the bone, was exquisitely painful, and was accompanied by severe inflammation of the soft parts. It had commenced about six months previously, and had grown rapidly up to the present time. The whole of the morbid mass was now removed with the saw, chisel, and mallet, the operator leaving the internal plate and alveolar process of the bone, as they appeared to be sound. The diseased soft structures were also excised; the hemorrhage was excessive; and, in about two weeks, the wound was completely cicatrized.

On the 26th of May, the patient again presented himself for the purpose of an operation, which was performed on the following day, and which consisted in the removal of the piece of bone left at the previous operation in December, 1845.

In eighteen months the disease reappeared in the remaining portion of the jaw-bone. Dr. Barclay declining all further surgical interference, the man consulted Dr. Blackman, of Newburg, who excised the portion of the

bone containing the rest of the molar teeth. The disease, again showing itself, was now removed by Professor Parker, of New York, the exsection embracing a portion of the ascending ramus of the jaw.

Twelve months after this the disease returned, and the man again solicited Dr. Barclay to perform an operation, which, however, he declined. The tumor increased with great rapidity, pressing inwards upon the tongue, so as to impede respiration and deglutition. He struggled hard for life, but became much emaciated, and died in June, 1851.

In this case not less than five separate operations were performed; that they had the effect of prolonging the patient's life no one can doubt. Death took place about ten years after the first appearance of the malady, and a little upwards of seven years after the first operation.

(7.) The next case is that of the late Dr. Twitchell, of New Hampshire. This gentleman, whose grandmother died of cancer of the breast, and whose sister had scirrhus of the pylorus, observed, when nearly sixty years of age, a small, hard tumor, free from pain, and not larger than a grain of mustard, at the inner angle of the right eye. It was imbedded in the substance of the skin, and seemed little inclined to increase. In 1843, it had attained the volume of a pea, and had a tendency to form scabs, the removal of which, under the use of Janning's eye-salve, usually exposed a small lobulated surface, covered with a little purulent fluid. In 1845, the greater portion of the tumor was excised by Dr. Hayward, of Boston. For a short time the wound seemed to do well; but, finally, refusing to heal, the part was removed again two months afterwards, and touched with nitrate of silver. Meanwhile, however, it had become the seat of a deep-seated and rather severe pain, radiating towards the brow and cheek, and less transitory than before.

The tumor continued to augment slightly, and in the spring of 1847 it exhibited a decidedly malignant aspect. It was an ulcer about the size of the top of the finger, with hard, ragged, and elevated edges, and an irritating discharge, which at night caused a gluing of the lids. Dr. Twitchell now determined to diet himself most rigidly, and for this purpose he used, three times daily, from four to six ounces of cream or rich milk, and the same quantity of white or brown bread. This course was faithfully persevered in with the effect of a complete cure until 1850, when the case was published. The pains in the part were lessened almost immediately; the purulent discharge also soon diminished; and it became apparent, in a few months, that the disease was not augmenting; the cure gradually progressed, and in August, 1848, the ulcerated mass was entirely gone, leaving the angle of the eye perfectly natural, excepting a minute white cicatrice, about a line in diameter. It is worthy of remark that this rigid course of dieting exerted no pernicious influence upon the patient's general health; but that, on the contrary, he presented, at the end of two years, when the cure was completed, the picture of a hale, robust man.

SECTION V.

TRANSFUSION.

CASE I. Successful transfusion for uterine hemorrhage, preceded by the statistics of thirty-five cases. By John Soden, F. R. C. S., Surgeon to the Bath General Hospital. *Medico-Chir. Transactions—Medical Examiner, 1854.*

TABLE

OF

Thirty-five Cases in which Transfusion was performed in consequence of Exhaustion or Hemorrhage connected with the Puerperal State.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
1	Blundell's Physiological Researches, p. 136.	Uterine hemorrhage "during the birth of the placenta." Respiration had ceased for five or six minutes before transfusion was performed. Sixteen ounces procured from two men; readily injected.	16 oz.	Unsuccessful.
2	—	Uterine hemorrhage "during the birth of the placenta." Respiration had not ceased, but the patient was <i>in extremis</i> . Three or four ounces only could be obtained from a lady.	3 to 4 oz.	Unsuccessful.
3	Lancet, Oct. 8, 1825; see also Waller's Book, 2d case. Mr. Doubleday.	Uterine hemorrhage after delivery. Blood taken from the husband; when six ounces had been injected, the woman spoke.	About 14 oz.	Recovered.
4	Lancet, Nov. 19, 1825. Dr. Blundell and Dr. Uwins.	Violent flooding after the birth of the placenta. Transfusion performed four hours after hemorrhage had ceased. Six ounces of blood were injected; this produced immediate improvement. Two hours after her powers again appeared to flag, and six ounces more were introduced. The blood was taken from two individuals.	12 oz.	Recovered.
5	Lancet, March 4, 1826. Mr. Doubleday.	Uterine hemorrhage. Woman cold and insensible. No particulars.	—	Unsuccessful.
6	Lancet, April 29, 1826. Mr. Waller and Mr. Doubleday.	A female had been confined to bed for three weeks before labor, by severe vomiting, and was so reduced as to be unable to turn in bed without assistance. Shoulder presentation; delivered by turning. Hemorrhage for five hours before delivery; collapse followed, and transfusion was had recourse to.	About 9 oz.	Successful.
7	Lancet, May 29, 1826. Mr. Ralph.	Abortion at the end of the third month. Copious hemorrhage for ten hours, when Mr. Ralph was sent for. Transfusion performed eleven hours after the hemorrhage had ceased. Four ounces only were injected; "in a few minutes animation was apparent."	4 oz.	Recovered.

8	Lancet, Feb. 2, 1828. Mr. Clement.	Miscarriage, attended by violent hemorrhage. Mr. Clement opened a vein in either arm, and injected about fifteen ounces from a stout, healthy man. "In a few hours she was perceptibly better," and gradually recovered.	About 15 oz.	Recovered.
9	Lancet, Feb. 9, 1828. Mr. Howell, Mr. Ravis, and Mr. Doubleday.	Transfusion before delivery. A woman had hemorrhage at the commencement of labor; it ceased on the membranes being ruptured. Three hours afterwards labor-pains returned, and some degree of hemorrhage; extreme prostration; pulse imperceptible. Blood obtained from the husband, a stout, healthy man. Fifteen ounces injected at intervals in fifty minutes. After five ounces had been introduced, the pulse became perceptible at the wrist; in another hour pains returned, and a dead child was speedily born.	15 oz.	Recovered.
10	Lancet, Jan. 3, 1829. Dr. Blundell, Messrs. Davis, Pointer, and Lambert.	Flooding after the birth of the placenta. Eight ounces of blood transfused, at intervals, in the course of three hours.	8 oz.	Successful.
11	London Medical and Physical Journal, Feb. 1827. Mr. Barton Brown.	In a tenth labor. Hemorrhage came on before the birth of the placenta; the hand was introduced, and it, with the after-birth, was expelled by the uterine contractions. Flooding ceased, but the collapse continued; stimulants were freely administered, producing a partial rally. Three tolerably smart convulsive attacks at this time ensued, each followed by alarming collapse. Transfusion was had recourse to, two hours and a quarter after delivery. Thirteen drachms were first injected, without effect; after five minutes the same quantity was repeated, upon which the pulse began to return in the radial artery; in ten minutes a third quantity was injected, with increased signs of restoration; a fourth quantity was attempted, but abandoned from the restlessness of the patient. Uterine hemorrhage followed the birth of a six months' fetus; placenta retained by hour-glass contraction. Placenta removed, and the hemorrhage ceased; but the patient remained in a state of extreme exhaustion. A teacupful of blood injected.	About 5 oz.	Recovered.
12	London Medical and Physical Journal, July, 1827. Dr. Douglas Fox.	Uterine hemorrhage at the third month of gestation. Transfusion successfully performed.	About 4 oz.	Recovered.
13	American Journal of Medical Sciences, 1830; from Journal Universel, March, 1820.	Hemorrhage after expulsion of placenta; perfect collapse; radial pulse just perceptible. Transfusion performed one hour after. Two ounces were injected, without effect; on repeating the amount, a tendency to syncope was observed, the pulse also filling a little, and some effort at vomiting	—	Successful.
14	Medico-Chirurgical Review, vol. viii., 1826. Mr. Waller's case. (See his pamphlet.)		4 oz.	Recovered.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
15	Medico-Chirurgical Review, vol. ix., 1826. Mr. Brigham.	was evinced. These symptoms ceased spontaneously, and the patient recovered. Eighth pregnancy. Hemorrhage three hours after the birth of the placenta. Five hours after commencement of the hemorrhage evidently sinking. Two ounces of blood injected with a common syringe; after the third injection the pulse improved. Transfusion continued at intervals of ten or twenty minutes.	10 to 12 oz.	Recovered.
16	Medico-Chirurgical Review. Mr. Jewell's case.	A delicate woman, exhausted by uterine hemorrhage. No vein being discoverable in the arm, the external jugular vein was opened, and four ounces of blood were injected. No good effect followed, and the patient died. On a post-mortem examination, a small quantity of air was found in the right cardiac cavities; whether introduced by the injection, or the product of decomposition, doubtful.	4 oz.	Unsuccessful.
17	Archives Générales de Médecine, vol. xxiv., 1830. M. Goudin, from Journal du Progrès.	Hemorrhage in the third month of pregnancy. Blood obtained from a healthy woman; four ounces injected, with a common eight-ounce syringe, two-thirds full.	4 oz.	Successful.
18	Archives Générales, vol. iii., 1833. Dr. Banner's case.	Hemorrhage from miscarriage, lasting twelve days. Transfusion was employed, with Blundell's apparatus. When five syringefuls had been injected, the breathing seemed oppressed; after a pause, two more syringefuls were thrown in, with increased oppression of the breathing.	Not named, but considerable.	Recovered.
19	Archives Générales, vol. vi., 1834. Dr. Klett.	Hemorrhage in the second month of pregnancy. Blood taken from the husband; only two ounces injected.	2 oz.	Successful.
20	Archives Générales, vol. vi., Dr. Klett.	Hemorrhage for ten hours. Two ounces and a half injected. Taken from the husband.	2½ oz.	Recovered.
21	Archives Générales, vol. xxv., 1851. M. Nitaton.	A woman, aged 20 had gone her full time; labor pains came on, with hemorrhage, attributed to placenta previa; delivered by turning. Ergot administered. Her condition rendered transfusion necessary. Three hundred grammes injected, by means of a hydrocele syringe. The cephalic vein was opened by a V-shaped incision, and two ligatures placed round it, one to the distal side, to prevent regurgitation of the blood injected, and the other to prevent the admission of air. The patient rallied	10 to 11 oz.	Successful.

22	Gazette Médicale, 1838, p. 381. M. de Berg.	immediately, and went on well to the seventh day, when abdominal pains appeared, and she died of puerperal peritonitis.	2½ oz.	Successful.
23	Medical Gazette, vol. xiv. Mr. Bickersteth.	Ninth labor. Hemorrhage after delivery, which continued at intervals for more than a fortnight, when transfusion became necessary. Two ounces and a half were injected by Dieffenbach's method. Resuscitation very gradual, but complete.	10 to 12 oz.	Recovered rapidly.
24	Edinburgh Medical and Surgical Journal, No. 145, p. 40. Dr. Oliver.	Delivery, at the eighth month, of the fourth child. Extensive uterine hemorrhage before delivery. In two hours afterwards transfusion performed, death appearing imminent. From ten to twelve ounces were injected; in less than two minutes the patient opened her eyes and showed signs of sensibility.	22 oz.	Successful.
25	Braithwaite's Retrospect for 1846; Northern Journal of Medicine, December, 1845. Mr. Brown.	A very important case. A woman, aged 42, attended by a midwife, with her seventh child. Violent hemorrhage. Dr. Oliver performed transfusion about twelve hours after the delivery, the patient being in a state of perfect coma, and no pulse having been perceptible in the carotids for two hours and a half. The blood was supplied by three different individuals, and about twenty-two ounces injected gradually and at intervals. The first twelve ounces produced no effect, but recovery progressed as the injection was proceeded with.	4 oz.	Recovered immediately.
26	Guy's Hospital Reports, vol. ii., p. 256.	A woman aged 37, liable to epilepsy. Suddenly attacked during labor with most alarming prostration. Craniotomy performed, and delivery effected. It does not appear that hemorrhage took place, but no rally followed. Four ounces of blood were injected.	14 oz.	Unsuccessful.
27	Dr. Collins's Treatise on Midwifery.	Placenta presentation; delivered by turning, by Mr. Lever. Great exhaustion from hemorrhage; next morning, after exertion, the exhaustion returned, and threatened to be fatal at 3 P. M. Mr. Tweedie performed transfusion. Seven ounces were injected; the immediate effect was surprising, and animation was restored completely. In an hour afterwards relapse took place; Dr. Ashwell repeated the operation with the same effect, but not to the same degree, and more transient; she died in an hour afterwards.	10 oz.	Unsuccessful.

No.	Reference.	Particulars of Case.	Amount of Blood Transfused.	Result.
28	Ingleby on Uterine Hemorrhage.	further hemorrhage, but no rally took place. The same continued for ten hours; during that time two-thirds of a bottle of burned spirit and more than a pint of port wine were administered. Transfusion was then adopted; ten ounces were injected, which caused the woman to mutter indistinctly, but produced no other effect. The circulation was not improved, and she died in a few minutes.	4 oz.	Recovered rapidly.
29	Medical Times, January, 1848. Mr. Greaves; Dr. Waller.	Hemorrhage after expulsion of placenta; prostration. Transfusion six hours after delivery! four ounces injected. Hemorrhage in the eighth month of pregnancy. Flooding ceased; the vagina was filled with coagulated blood, which it was not thought prudent to disturb. No rally took place, and transfusion was had recourse to. Blood was drawn from a woman; when five ounces had been introduced, an amendment was evident; pulse more perceptible, and the countenance wore a better aspect. The blood now flowed sluggishly from the woman who supplied it. It was determined to wait; nourishment and stimuli were occasionally administered; after two hours and a half, the patient began again to sink, and jactitation supervened; four ounces more were again injected from the same individual, but this time without any effect. Blood was then drawn from the husband, a glassful of hot spirits and water having been first given him; the blood flowed from his arm "in an impetuous stream." The first injection of two ounces produced a marked alteration in the pulse; when nine ounces had been introduced the countenance was much improved, and after four ounces more all symptoms of danger had vanished. The case proved to be one of placental presentation. After some hours' sleep labor came on, and the woman was safely delivered.	22 oz.	Successful.
30	Lancet, March 28, 1835. Mr. Healey and Dr. Fraser.	A feeble strumous woman, aged 40. Uterine hemorrhage, with retained placenta. Collapse had lasted six hours. Blood drawn from the husband ("a strong healthy man"); four ounces transfused; rapid improvement; restoration complete in an hour.	4 oz.	Recovered rapidly.
31	Lancet 1839-40. Mr. May.	Hemorrhage from abortion, in the fifth month of pregnancy. The hemorrhage had continued for some days, and an alarming condition for four hours. After eight ounces were injected, some rallying signs were ob-	24½ oz.	Successful.

32	Lancet, April 19, 1851. Mr. Masfen.	<p>served, and improvement progressed till twenty-four and a half ounces had been transfused, when a slight turbulent action was observed in the carotids; it ceased immediately, and the patient rallied. The blood was supplied by four healthy males. In five days afterwards the bleeding returned, and she sank.</p> <p>A delicate lady, aged 38, four months gone in pregnancy, fetus having been dead two months; flooding; abortion. Transfusion performed two hours after insensibility became complete, blood supplied by a "stout buxom-looking servant-maid." Three ounces first injected; some degree of consciousness existed, but transitory; in half an hour a second three ounces injected, again followed by a gradual relapse; after an hour a third injection was tried, with permanent restorative effect. Considerable inflammation followed in the vein below the elbow. Total quantity transfused, nine ounces, over a period of an hour and a half.</p> <p>Transfusion performed at the Hotel Dieu, Lyons, upon a young woman reduced to "mortal debility" by hemorrhage, with successful result. Particulars not given.</p>	9 oz.	Successful.
33	Lancet, December 13, 1851. M. Devay.	<p>Case of flooding, after delivery by turning. Dr. Marmonier successfully performed transfusion, without any assistance, and with a child's toy syringe, holding about 70 grammes. The syringe was twice introduced, and about 90 grammes transfused.</p>	—	Successful.
34	Medical Times, Aug. 9, 1851, reported by Dr. Eve, from Gazette Médicale, July 5, 1851. Dr. Marmonier.	<p>Patient aged 37. Placental presentation. Great loss of blood had taken place for three weeks previously. When Dr. Crosse was called in, the patient was "pallid, exhausted, cold, pulse just perceptible." Delivery by turning, without additional loss of blood beyond what is usual. No rally took place. Transfusion performed to the extent of ten ounces, taken from the husband; death within an hour afterwards.</p>	About 3 oz.	Successful.
35	Dr. Crosse's Cases in Midwifery.		10 oz.	Unsuccessful.

On January 7th, 1849, a lady was attended in Bath by Mr. Ormond, a gentleman of great experience and intelligence, at the birth of her second child. The labor was rapid, and the latter pains so severe that the uterus was violently emptied of its contents and became inverted; a gush of blood ensued, and the patient fainted—the placenta was detached and the uterus returned to its natural situation. No further hemorrhage took place—I joined Mr. Ormond in about half an hour—the patient had not rallied—she was lying on her back, insensible, perfectly cold, pulseless, and exsanguious in appearance—the only signs of life were short, jerking respirations at long intervals, and of a stertorous character. Nothing could look more unpromising than her condition at that time. Mr. Ormond was using means to restore warmth by friction, mustard-poultices, etc., and was administering brandy by teaspoonfuls, which the patient was just able to swallow. These means had now been employed for more than half an hour without any effect, and there scarcely seemed any hope that the patient would recover from the extreme exhaustion in which she then lay. We agreed that transfusion was the only resource, and I left Mr. Ormond to procure the instrument that occurred to me at the moment as best adapted for the purpose. I returned in half an hour, and during the interval Mr. Norman had arrived. No change had taken place in the patient's condition; and as we were now prepared to act, we determined to wait a little longer to watch for any indication of the course the case would take. This was presently afforded in an unmistakable manner. The patient was no longer able to swallow, the respirations became more rare and stertorous, and were evidently on the point of ceasing altogether. Transfusion was now had recourse to, and the following plan was adopted for its execution. My instrument was a well-made syringe of German silver with a detached stopcock; it was larger than was desirable, being capable of holding seven ounces. Mr. Norman exposed the external cephalic vein, by an incision two inches in length, (the arm being fat). Mr. Ormond bled the husband, the blood being received into a small deep basin, standing in another containing hot water. As soon as sufficient blood had been drawn, I filled the syringe, previously well warmed and invested with a hot cloth, and at once proceeded to inject the blood into the vein. At first it would not pass up, but returned by the side of the pipe; presently the opposition from the close contact of the coats of the vein seemed to give way, and the blood, though impelled by a steady and moderate pressure, rushed up the vein with a rapidity that the eye could scarcely trace. The effect was electrical; instantaneously a convulsion seized the whole frame, and the muscles of the face were frightfully distorted. I paused in the injection, and I do not think more than an ounce could have found its way into the circulation; happily it was sufficient: the convulsion was but momentary, and signs of returning animation immediately succeeded. A restless movement pervaded the whole body—the arms were tossed over the head, and though consciousness did not return, the patient faintly but audibly spoke, muttering two or three times the expression “so tired,” “so tired,” she seemed to pass from a state of coma into one of syncope. The heart's action was now distinctly perceptible, and the vital energy gradually but very slowly returned: it was full an hour before any pulse could be felt at the wrists, and though the recovery steadily progressed without relapse, the patient did not recover consciousness until the following morning. During the whole of this time, every means was used to promote warmth, and no difficulty was experienced in getting the stimulants swallowed, that were from time to time administered. Some inflammation was set up in the forearm below the point of the incision, but it was not of any moment, and subsided in two or three days, with the application of

fomentations only. I hear from Mr. Ormond, that the patient remained for a long time in an exsanguious state, and complained of weakness and pain in the back. She did not nurse her child, and the catamenia returned in three months. After this period she left for change of air, and Mr. Ormond lost sight of her, but he subsequently heard that, suffering from leucorrhœa, she went to London, and was treated for ulceration of the womb. This lady is now in India; recent accounts have been received of the birth of another child and the well-doing of the mother.

CASE II. *Successful transfusion; the blood of a man injected into the veins of a woman who was apparently dying from uterine hemorrhage.* By Dr. Blundell, of London. *Lancet*, 1827, vol. vii-viii.

This operation was performed about three weeks since, under the direction of Dr. Blundell, Lecturer on Physiology and Midwifery at Guy's Hospital.

A poor woman, about 25 years of age, was attended, whilst in labor, by Mr. Waller, of Aldersgate street. Nothing particular occurred during the labor, but after the birth of the child and expulsion of the placenta, the womb did not properly contract, and during the absence of the medical attendant flooding occurred to an alarming extent. When visited by Mr. W., the patient's pulse, at the wrist, was scarcely perceptible, indeed, at times, it could not be felt; the lips and face were of a pallid, or death-like hue, and in a word, the taper of life was but faintly glimmering.

Under these circumstances, it occurred to Mr. Waller that the operation of transfusion would be a measure to rescue the patient from her perilous situation.

Dr. Blundell was sent for, and upon his arrival he found the patient had somewhat rallied; in consequence of which he deemed it better to delay the performance of the operation, for, as Dr. B. observed to his pupils, this operation is only justifiable in extreme and otherwise desperate cases. After waiting an hour the patient became worse; she vomited and was exceedingly restless, which may always be regarded as a very bad symptom; the pulse at the wrist was fluttering, and occasionally not to be felt, and there was that peculiar expression of countenance which can scarcely be described; it may be called "death in the face." It did not appear proper to delay the operation, which was therefore commenced as follows:—

The cephalic vein of the right arm was laid bare, to the extent of about an inch, and a blunt-pointed bent needle was passed under the vein, at the lower part of the opening, so as to prevent the efflux of blood. The husband of the patient, a robust, healthy young man, was now called in, and two ounces of blood were taken, in a full stream, from his arm, and received into a conical glass tumbler. An opening of about $\frac{1}{2}$ of an inch was made in the vein of the patient, and by means of a syringe and tube the blood extracted from the husband was somewhat slowly thrown in, towards the heart. No very obvious effects were produced from this supply of vital fluid, and after a pause of one or two minutes, two other ounces of blood were thrown in; soon after this the pulse at the wrist intermitted, and there was slight restlessness, or rather desire to change posture, but these symptoms passed away in the space of two or three minutes. In consequence of the occurrence of these symptoms, it was deemed prudent to wait awhile; and after a lapse of five or ten minutes the patient was evidently rallying.

From this period the patient went on improving, and had not a single bad symptom which could be attributable to the operation; the functions of respiration, circulation, and of the chylopoietic viscera, were duly performed; the temperature of the surface of the body was of the natural standard; neither

was there any subsequent affection of the sensorium, which Dr. Blundell has known to occur in some cases after the operation of transfusion.

The syringe employed was of brass, well tinned on the inside; to the mouth of the syringe a pipe was fixed, of about two inches in length, of the size of a crow's quill, shaped like a pen at the end, but with a blunt point.

Before the blood was thrown into the vein of the patient, all air was carefully expelled from the syringe, by placing the mouth upwards and pushing up the piston until the blood appeared at the end of the tube attached to the syringe.

Dr. Blundell observed, this case demonstrated, beyond all cavil, that the blood of a man may be injected, by means of a syringe, into the veins of a woman exceedingly reduced from hemorrhage, without causing death. Whether the syncope which occurred after the injection of the blood was the result of the operation, or of the previous hemorrhage, may be disputed; and admitting the syncope to be the result of transfusion, we should be no more justified in rejecting the operation on this account than in refusing to employ the lancet in other cases, because it occasionally produces syncope.

As only four ounces of blood were injected, Dr. Blundell admitted, that it might fairly be questioned by some, whether the supply of so small a quantity of blood really saved the patient. The Doctor, however (and he has seen a great deal of hemorrhage), is decidedly of opinion that this timely supply of vital fluid turned the scale in the patient's favor, and rescued her from death.

CASE III. Successful transfusion for hemorrhage in a woman; the house-surgeon furnishing the blood. Lancet, 1851.

M. Devay, of the Hôtel Dieu, of Lyons, has just performed the operation of transfusion upon a young woman reduced to mortal debility by hemorrhage (the *Courrier de Lyon* does not mention the kind of hemorrhage). The blood was kindly furnished by M. Lardet, the house-surgeon, and the patient revived by the introduction of the warm and healthy vital fluid. Three days after the operation the symptoms were very favorable, and we learn by further accounts that this effect has not been merely momentary, but has been followed by complete recovery, or rather a kind of resurrection, the patient being now fully convalescent. These results have been deemed so important by the Dean of the Faculty, Dr. Richard, that he mentioned them in his introductory discourse at the opening of the winter session, bestowing the due meed of praise both on the physician and the house-surgeon, M. Lardet, who so readily consented to part with a portion of his blood.

CASE IV. Successful transfusion for hemorrhage in abortion. By G. B. Masfen, Esq. Lancet, 1851.

On the 30th of July, 1848, at 1 P. M., I was called in to attend Mrs. B——, a lady of particularly delicate appearance, in her thirty-eighth year. It appears that on the evening of the 29th she had perceived some slight sanguineous discharge from the vagina, and had consulted my father, to whom she described herself as being four months advanced in her tenth pregnancy, but thought that the child had not grown for the last month or two. He ordered a mixture containing diluted sulphuric acid with Battley's sedative; but the discharge continued to increase until about seven o'clock this morning, when it became quite alarming. Plugging and injections of oak bark were tried, but with no effect, and a dose of ergot was administered, which produced a severe pain, and the expulsion of a two months' fœtus; but the hemorrhage continued to increase till 1 P. M., when I first saw her.

I found her excessively weak, from loss of blood; not the slightest pulse was to be felt at the wrist; and she became at last insensible. The stomach rejected everything, and though the hemorrhage had in a great measure stopped, there was every symptom of sinking and speedy dissolution.

About three o'clock, it being the opinion of every one present that it was the only possible means of saving her life, the operation of transfusion was decided upon, which I performed in the presence of Dr. Knight and my father. I immersed a four ounce brass syringe in water at the temperature of 110° Fahr., and drew a full stream of blood into it from the arm of a stout buxom-looking servant-maid. This I injected into a vein on the left arm, taking every precaution to prevent the admission of any air-bubbles. As the operation was going on, consciousness appeared to be somewhat roused, and the pulse became slightly perceptible at the other arm, but in the course of half an hour the pulse had again disappeared, and she remained still unconscious. I then a second time injected three ounces of blood into the right arm (the veins were so small and empty that there was difficulty in finding the same opening twice); this was again attended with a return of pulse and sensibility, which, however, gradually disappeared as before. After an interval of nearly an hour, I injected a third three ounces of blood, which produced more permanent good effects; the pulse gradually rose as the injection went on, color made its appearance in her face, and she inquired if we had been bleeding her. During the evening she complained much of thirst, and she had occasionally a teaspoonful of wine and water. Eight P. M. The pulse was slightly perceptible, but was not to be counted; she attempted to take a cup of tea, but it was immediately rejected, as was also even a teaspoonful of water, and she remained all night awake and thirsty, but afraid to drink even a little water.

31st—6 A. M. The pulse was 150, and very much increased in strength; the tongue dark-brown, hard, and dry. Ordered three drops of creasote in form of a pill. She vomited almost immediately after taking it, but did not throw up the pill, which from that time appeared to allay the sickness. She then took a tablespoonful of brandy-mixture every hour. In the evening she still complained of thirst, and was ordered the following mixture: Sesquicarbonate of soda, two and a half drachms; sesquicarbonate of ammonia, half a drachm; compound tincture of cardamoms, two drachms; oil of lemon, six drops; distilled water to six ounces. Two tablespoonfuls to be taken every three or four hours in a state of effervescence, with twelve grains of citric acid. There was great extravasation of blood for six or eight inches above and below the elbow in both arms, probably the effect of the injection. Ordered warm-water dressing.

August 1 and 2. She continued gradually improving in appearance; her pulse was slower; and she was better able to take slight nourishment. The arms were becoming more ecchymosed, and she complained of great pain in them. The warm-water dressing was continued.

3d. Her health is gradually improving, and she is taking no medicine; complains of great pain in the right arm, which was much inflamed, and very hard just below the elbow, and seemed likely to suppurate. Ordered castor-oil and the water-dressing.

4th. The arms rather better; the swelling abated.

5th. Continues to improve, both in health and as regards her arms. Ordered tincture of sesquichloride of iron, one drachm; infusion of quassia and camphor mixture, of each three ounces; to take two tablespoonfuls three times a day.

14th. The arms have been gradually improving, and the discoloration is nearly gone, but they remain very weak, and she is not able to write.

28th. She has now quite recovered the use of her arms, and is in general good health. From this time I discontinued attendance.

In June, 1849, she miscarried again, but otherwise she has remained perfectly well up to the present time.

SECTION VI.

HEMORRHAGE, ANEURISM, AND LIGATURE TO BLOODVESSELS.

CASE I. *Successful treatment of uterine hemorrhage by compression of the aorta.* By Dr. Plouviez, of Lille. New York Journal of Medicine, 1851.

M. Villeneuve read a report on a communication from Dr. Plouviez, of Lille, on this subject. The case was that of a young woman, twenty-three years of age, safely delivered of her third child; she had gone on well until the tenth day of her accouchement, when several attacks of hemorrhage occurred, which were checked by plugging, cold affusion, etc. On the following day there took place another and more violent flooding, which threatened her life. M. Plouviez practised compression of the aorta at the sacro-vertebral junction, and the hemorrhage instantly ceased. The compression was maintained for forty-five minutes, the other usual means being employed at the same time. Six days afterwards another flooding occurred, and induced such extreme syncope that the patient was considered to be dead. When compression had been continued three-quarters of an hour, some signs of returning animation appeared, which, however, again quickly vanished, despite the entire cessation of hemorrhage, the return of which was prevented by prolonging the compression for several hours. After patient perseverance with various means, life was restored, and the patient completely recovered.

CASE II. *A patient bled one gallon in twelve hours.* By George Taylor, M.D., M.R.C.S. Lancet, 1827, vol. xii.

The following case is reported for the purpose of showing that, under particular circumstances, an immense quantity of blood may be safely and advantageously abstracted.

Goodeve, a strong muscular man, came to my house, and requested the assistant to bleed him for the relief of an oppression in his breathing, to which he had been occasionally subject. Two pints of blood were taken! He soon returned to complain that his arm was painful and disposed to swell, when the bandage was removed, and a purgative administered. He returned home and threw himself upon the bed; but the swelling and pain increasing, he again came to my house, when I saw him; the arm was enlarged, painful, and hot. I ordered him thirty leeches, and desired, upon their falling off, that the whole arm might be enveloped by a cold poultice; gave him hyd. submur., gr. xii.; opii, gr. iss.; ant. tart., gr. j.; a purgative mixture, and ordered him to bed. At night I was summoned in great haste; I found him writhing about in the most intolerable agony, his pulse too quick to be counted, his tongue dry and brown, and the arm enlarged to three its natural size, the swelling extending from the puncture in the vein to the scapula on the one side, and to the clavicle on the other, the whole surface looking polished, and in some spots black.

Under these desperate circumstances, I thought myself justified in bleeding him largely; I therefore tied up the left arm, and took away as much blood as was required to produce fainting, by which he was completely relieved; on the following morning the arm was greatly reduced in size, free from pain, and altogether in so very satisfactory a state, that in a few days he was enabled to leave his room.

Upon measuring, I found that I had taken away six pints, which, with the two abstracted by the assistant, furnished the startling quantity of "one gallon of blood within twelve hours," and I have no doubt that it saved his life.

CASE III. *Fatal hemorrhage from the vertebral artery, after a stab in the neck.* Gazette Médicale de Paris—British and Foreign Med.-Chir. Review, 1841, vol. xxxv.

One of the porters of the prison at Limoges was stabbed on the right side of the neck, at about an inch below, and a little in front of, the mastoid process. The assassin had struck him from behind, and the direction of the wound appeared to be transversely from without inwards. The hemorrhage was frightful, and was evidently arterial. As the temporal and facial arteries on the wounded side still continued to pulsate, it was inferred that it was not the external carotid that had been divided. Was it the vertebral? or was it the internal carotid?

M. Voisin, deeming that it was the latter vessel, proposed to tie the common carotid, and immediately performed the operation. But the hemorrhage from the wound continued as profuse as ever, and could only be checked by firm compression somewhat above the wound. At length it ceased; and on the sixth day after the accident, the wound was almost completely cicatrized. Three days subsequently, after walking about for a minute or two, a slight hemorrhage returned; but this was quickly arrested by repeating the compression as before. On the following week, however, again it broke out; and, on removing the apparatus, the skin was found to be somewhat gangrenous, where the firm pressure had been made. Although the bleeding did not return, M. Voisin proposed to perform a second operation, with the view of securing the upper end of the vessel that had been wounded. On making an incision through the integuments, a frightful stream of blood poured forth. This could not be stopped by compression either above or below the seat of the wound; but it was checked by keeping up firm pressure along the course of the occipital artery, behind the mastoid process. M. Voisin, supposing, therefore, that it was this vessel that had been injured, immediately set himself to tie it at its origin. The sterno-mastoid muscle was therefore divided at its upper insertion, and the digastric was exposed, when the hemorrhage returned with redoubled violence, and could be only arrested by pressure with the fingers at the bottom of the wound. As it was utterly hopeless to attempt placing a ligature, all that was done was to fill the wound with a compress, and secure it in its place with a bandage. From this time to the period of his death, which occurred two days afterwards, the patient complained of pain and a sense of powerlessness in his right arm.

Dissection.—The vertebral artery was found to have been almost completely divided at the point of its exit from the third cervical vertebra, where it forms an arch to reach the aperture in the transverse process of the second vertebra.

CASE IV. *Traumatic aneurism of the vertebral artery cured by compression, after opening the sac.* By Warren Stone, M. D., Prof. of Surgery in the University of Louisiana. New Orleans Med. and Surg. Journal, 1850.

Slave Anthony, aged about thirty, was received in my Infirmary Nov. 28, 1849. He said that in July he received a wound in an affray, in the neck, and lost a large quantity of blood; the hemorrhage was arrested and the wound healed, but a swelling commenced soon after, which had gradually increased

up to the time of his admission into the Infirmary; upon examination, a large tumor was found upon the left side of the neck, which evidently contained coagulated blood, and I thought pus. A small cicatrix showed where the wound was. A careful examination showed that the carotid and internal jugular were not wounded. Auscultation gave no signs, and I came to the conclusion that, either the external jugular, or one of the cervical arteries, had been wounded. The tumor was full; the integuments were about to give way. It was necessary to do something; I concluded to open the tumor, empty the sac, and secure whatever had been wounded. The opening was made, when a small portion of the coagulum was discharged, and a sudden gush of arterial blood took place. I placed my thumb upon the carotid artery, but with no effect; Dr. Compton, who has been long in the Hospital, was assisting me; he held the knife I had laid down, and I desired him to enlarge the incision, which was promptly done; the whole of the coagulum was forced out, and it was found that the vertebral artery had been wounded. For a moment, a finger was thrust between the transverse processes, which controlled the violence of the bleeding, and lint was carefully applied for a permanent dressing; this controlled the bleeding; granulations shot out luxuriantly, filled the wound, and plugged up the wounded artery. (We are not satisfied that granulations ever *plug up a wounded artery*. The artery in this instance must have been obliterated by pressure.) The patient is now well. Dr. McIlhenny was by his bedside, who could act if bleeding had occurred, but his services were not required. This is a new case so far as the artery is concerned, but the treatment is not new with me.

CASE V. Hemorrhage from the vertebral artery after a wound by a pistol-ball; ligation; death. By M. Maisonneuve, of Paris. *Lancet*, 1852.

M. Maisonneuve, of Paris, has laid the following instructive case before the Academy of Medicine: A lady was shot by her husband, who stood close to her, with a pistol loaded with ball. The wound was inflicted on the anterior part of the neck, on a level with the left side of the cricoid cartilage. The hemorrhage had been considerable when the surgeons, Messrs. Maisonneuve and Favrot, arrived, though the wound looked, at first sight, as if it had not penetrated deeply. There was pain and numbness of the left arm; respiration, voice, and deglutition were, however, normal. By sounding, it was found that the cricoid cartilage had been bared, and that the ball had then run from above downwards, leaving the trachea and œsophagus internally, and the common carotid, internal jugular, and pneumogastric externally, and had become impacted in the body of the sixth cervical vertebra, where it could easily be felt. Some attempts at extraction were made, but they excited so much pain that they were given up. The patient was bled six times in four days, and was given large doses of opium; she improved considerably under this treatment, and the inflammation was very moderate.

On the eighth day hemorrhage occurred at the wound, and also on the ninth day, but it stopped of itself on each occasion. When, however, it broke out a third time, the surgeons proceeded at once to search for the bleeding vessel. An incision, about three inches long, was made by the anterior edge of the sterno-mastoid muscle, a little external to the wound inflicted by the ball; the carotid sheath was then brought into view, the vessels being found intact. The cricoid cartilage and the first rings of the trachea were afterwards seen to have been grazed by the ball, which was found implanted in the body of the sixth cervical vertebra, whence it was easily extracted. Severe hemorrhage ensued immediately upon the removal of the ball, the blood seeming to proceed from the vertebral artery, which appeared to have been

wounded within the canal formed by the foramina of the transverse processes. By placing the finger on the hole left by the ball, the orifice whence the blood issued was distinctly seen; forceps were applied to it, and held firmly for a little while to arrest the hemorrhage, and an aneurismal needle, with a very small curve, was then made to carry a double thread behind the vessel. One of these was used to tie the artery above, and the other below the aperture whence the blood issued.

The operators at first thought they were mistaken in supposing that they had tied the vertebral artery, as the vessel seemed quite free, whilst it is known to be protected by the transverse processes in that locality, and believed they had secured the inferior thyroid. This will be cleared up by the autopsy. The hemorrhage ceased at once, and some smaller vessels were then tied, among which was, as afterwards appeared, the inferior thyroid artery. Everything now went on favorably; the threads fell on the ninth day after the deligation of the vessel, and the patient remained in a satisfactory state for the next five days, when severe febrile symptoms, unpreceded by shivering, set in upon a moral shock; and on the eighteenth day after the operation, and twenty-seventh after the reception of the wound, the patient was suddenly seized with a violent pain in the cervical region, cried out loudly, and fell into deep coma, which lasted for about seven hours, when she expired, notwithstanding the most strenuous means were used to rouse her.

On a *post-mortem examination*, the course of the ball was found as stated above, viz: It had run from the integuments to the body of the sixth cervical vertebra, leaving the trachea and œsophagus internally, and the carotid sheath and its contents externally. The inferior thyroid artery was wounded just before it reaches the thyroid gland, and had a firm clot, about half an inch in length, filling its cylinder. The transverse process of the sixth cervical vertebra was fractured, and had left the wounded vertebral artery unprotected. The vessel above and below the wounds in its coats was filled with a firm clot for about an inch in each direction. The body of the sixth cervical vertebra had been perforated by the ball, and the latter had dug for itself a canal, which communicated with the cavity of the spine by a small aperture, evidently of very recent formation. This aperture resulted clearly from the necrosis of the thin shell of bone which formed the bottom of the canal. The cancellous texture of the body of the vertebra was infiltrated with pus, and a sero-purulent fluid was found in the spinal canal, both in the areolar tissue external to the dura mater, and in the subserous texture of the meninges. No other lesion existed in any other part of the frame.

CASE VI. *False aneurism of the brachial artery cured by galvano-puncture.* By the late M. Amussat, of Paris. *Lancet*, 1851.

M. Amussat has related the following case before the Academy of Medicine of Paris: A butcher, aged 35, wounded the internal and lower part of the arm with a penknife; the artery was injured, compression used, and seventeen days afterwards the man was sent to M. Amussat with a pulsating tumor, the size of a hen's egg, on the spot where the wound had been inflicted.

M. Amussat, relying on the accounts published by M. Pétrequin, of Lyons, tried galvano-puncture in the following manner: Two fine platinum needles, covered with gum lac over that portion which was to be in contact with the skin, were introduced into the tumor, and the poles of a trough of thirty compartments brought into contact with the needles for the space of five minutes. The couples were gradually increased to twelve, and after five more minutes (giving altogether ten) the needles were withdrawn, because the patient was in great pain. Lead wash was then applied to the tumor; no unpleasant

symptoms occurred, and three days afterwards the aneurism presented pulsations over an area the size of a five-shilling piece. Four needles were now introduced; this sitting lasted sixteen minutes, and the couples were increased to sixteen. The same dressings were used as before, and in four days the tumor was found smaller, harder, presented no pulsations, and had assumed a brownish color. The swelling diminished in size from day to day, the pulsations never returned, and the cure may be looked upon as quite complete, as M. Amussat presented the patient to the Academy in July, 1851, whilst the operation had been performed on the 13th of October, 1847. After almost three years the value of such a case has very naturally remarkably increased.

CASE VII. *Aneurismal varix from a gunshot wound, implicating the junction of the internal jugular and subclavian veins and the subclavian artery; patient surviving seven years and then dying of chronic diarrhœa.* By J. P. C. Wederstrandt, M. D. New Orleans Med. News and Hospital Gazette, 1854.

This patient is at present in ward No. 20 of the Charity Hospital, New Orleans. The account he gives of himself is as follows: About seven years ago a difficulty occurred between himself and the inmates of a house on Tremé Street; firearms were used, and he received a wound in the neck. The ball entered just above the sternum—a little to the right—appeared to have passed under the sterno-mastoid muscle, and, perforating the trapezius, emerged on the posterior part of the scapula of the right side. A violent hemorrhage took place at the time, which was arrested by compression, etc. He then entered the hospital, when the attending surgeon noticed a tumor, situated just above the clavicle, in the neighborhood of the wound, formed apparently by the dilatation of the external jugular vein, and its branches. On auscultation there was a loud bellows murmur accompanied by a distinct purring thrill. This murmur was heard extending down in the direction of the course of the descending vena cava. It obscured the normal sounds of the right side of the heart. Such is the history given us. On examination at present, the tumor is still seen, and auscultation gives the same results as above described. The right arm is withered, being about one-fourth smaller than the other; the power to use it is in a great measure destroyed; its temperature is lower; the sensibility less, and the pulse weak and not synchronous with that of the opposite side. The patient is pale and anemic, resembling many cases that we see, where there is permanent patency of the aortic valves. Could this state have been caused by defective nutrition, the result of disorder in the general circulation? The interesting query also arises as to what artery and what vein were injured at the time of the accident. Could it be the carotid and the internal jugular vein? One would suppose so from the direction which the ball seems to have taken. Could it be the subclavian artery and vein? But would not similar wounds produce almost instant death? The feel of the tumor is precisely the same as that of the aneurismal varix at the bend of the arm, the result of accidents produced by venesection. The blood rushes evidently from the artery during the systole into the vein, and from the vein into the artery during the diastole. The commotion of the blood so rushing gives origin to the murmur, and the purring thrill is nothing more, if such an expression may be used, than the *feel* of this murmur.

Little did we expect so soon the opportunity of verifying the diagnosis and answering the queries put forth by the reporter. The patient came in the hospital affected with a chronic diarrhœa, of which he died after a sojourn of a few weeks in the wards. The correctness of the diagnosis, as to the

nature of the affection, of which there could have been no doubt, was thus verified. On *examination*, the superficial and deep veins of the neck were found much enlarged, particularly the external and internal jugulars. Upon a careful examination of the parts, a sac, situated internal to the scalenus anticus, was found resting on and adherent to the first rib; the parietes of this were lined with calcareous matter. This being evidently the seat of the injury, the sac was opened, and a communication between the *internal jugular and subclavian veins at their junction and the subclavian artery was found*. This case is remarkable from the fact that death was not produced instantaneously by the wounding of vessels of such importance.

CASE VIII. *False aneurism of the gluteal artery; ligation; recovery.* By the late Mr. Richard Carmichael, Surgeon to the Richmond Hospital, Dublin. British and Foreign Med.-Chir. Review, 1834.

Many, if not most of us, remember the poetical description of the case of the leech-catcher, contained in the works of the late John Bell. That case was one of a terrible character, an incision of two feet in length—eight pounds of coagulated blood removed from the sac—and a deluge of fresh blood, followed by a loud whizzing noise and apparent extinction of the patient's life, constituting its faithful and horrid features. The anatomist relying on the seeming exactness of his science, has ventured to doubt and to dispute the sober reality of John Bell's statement, and a strong imagination has been thought to have lent its vivid coloring to the dull and diminutive objects of nature. The sceptic may feed his favorite passion with the modest and unobtrusive circumstances of the following case:—

A young gentleman, aged 17, received accidentally in the right hip a wound with a penknife, which penetrated as far as the handle would permit. This was instantly followed by a gush of blood so strong as to dash against the contiguous walls of the chamber. The hemorrhage was immediately arrested by a medical man.

Three days afterwards the patient imprudently rose from his bed and walked down stairs. He had scarcely returned to his room when he felt an acute pain in the hip, immediately succeeded by tumefaction. This increased daily, and on the 19th of September of the present year, eleven days after the occurrence of the accident, Mr. Carmichael was requested to visit him.

"On examination I found the entire right hip considerably swollen and firm to the feel, the skin was slightly discolored, having somewhat the appearance that a bruise would present. The trochanter could scarcely be felt, so great was the tumefaction. On measuring the two hips, by passing a tape between the thighs to the anterior superior spinous process of the ilium of each, the affected hip measured two inches more than the sound one; the upper part of the thigh was also so much swollen, that its circumference measured more by an inch and a half than the other; the integuments were also discolored more or less even to the ham. The small cicatrix of the wound was situated about half an inch above the presumed situation of the upper margin of the ischiatic notch, where the gluteal artery emerges from the pelvis. No pulsation was evident to the eye, even on the most minute examination, but the strong pulsation of an aneurismal tumor was manifested to the ear by either immediate or mediate auscultation.

Mr. Carmichael very reasonably supposed from the preceding circumstances that the case was one of diffused aneurism from the wound. He resolved to offer the patient the chance that general means could afford. He directed the abstraction of ten ounces of blood from the arm, draughts containing tincture

of digitalis were given every sixth hour, a cold lotion was applied to the tumefied parts, and absolute rest in the recumbent position enjoined. This plan, with occasional opiates to meet pain and uneasiness, was persevered in during five days, but no benefit was derived; on the contrary, the tumefaction of the hip and entire limb was obviously increasing, and the state of the patient was so distressing, that even he himself became anxious for the operation, which was performed on the 24th of September, in the presence of Messrs. Colles, Adams, M'Dowell, Hutton, Logan, and Doctor Brown. It would be difficult and unjust to abbreviate the already brief notes of this successful operation.

"The patient being placed on a table, lying upon his face, I commenced the operation by an incision five inches in length, commencing an inch below the posterior superior spinous process of the ilium, and about the same distance from the margin of the sacrum, and continued it in a line extending obliquely downwards to the trochanter major. The gluteus maximus and medius were then rapidly divided, or rather their fibres separated (as the incision ran in the direction of the fibres) to the same extent as that of the integuments. The coagulated blood forming the tumor then became apparent through the sac, or condensed cellular membrane with which it was covered. This was divided the whole extent of the incision, by running a buttoned bistoury quickly along the finger introduced into the sac; and its contents, consisting of from one to two pounds of coagulated blood, were emptied rapidly out with both hands into a soup-plate, which it completely filled. A large jet of fresh blood instantly filled the cavity I had emptied, but the precise spot whence it came being perceived, I was enabled by pressure with the finger to prevent any further effusion, while that which had been just poured out was removed by the sponge. It was obviously the trunk of the gluteal artery, just as it debouches from the ischiatic notch, which had been wounded. I endeavored, but in vain, to secure the artery by means of the tenaculum. I had then recourse to a common needle of large size, and with this instrument was immediately successful in passing a ligature around the bleeding vessel, and of preventing all further hemorrhage. After having waited some little time, to ascertain if the artery was perfectly secured, lint was introduced to the bottom of the wound, as it was not likely that union by the first intention would take place between the walls of the extensive cavity which contained the coagulated blood. The patient was then put to bed, and an anodyne given to him."

On the third day the external dressings were removed. On the fourth, the greater part of the lint contained in the cavity came away, followed by a flow of matter of good quality. On the sixth, the remainder of the lint and the ligature were discharged. The report is closed on the sixteenth day, when the patient is said to be completely convalescent, and the wound rapidly healing.

CASE IX. *Aneurism of the gluteal artery; ligation of common iliac; death.* By Prof. C. W. F. Uhde. *Deutsche Klein.*, 1853. *Med. News.*

A smith, aged 26, for five years subject to rheumatism, complained of severe pain in the left thigh of fourteen days' duration. The author found a tense, painless, elastic, and pulsating swelling in the buttock above the trochanter. Having, upon examination, arrived at the conclusion that it was an aneurism, Prof. Uhde proceeded to tie the common iliac artery (October 7) in the usual manner. The patient died October 11, four days afterwards.

Examination of the body.—Wound healthy; the peritoncum in the neighborhood covered with a thin layer of lymph. The areolar tissue around the

iliac vessels infiltrated with pus. The gluteal artery within the pelvis exhibited a marked dilatation. The gluteus medius muscle appeared like a dark-colored bladder full of blood, and it formed the outer wall of the sac, which contained four ounces of coagulum.

The author relates ten cases of gluteal aneurism; eight in men, two in women, the patients' ages varying from 17 to 60. The causes assigned were—a stab, disease following drunkenness, rheumatism, severe labor, straining, injury to the hip. In three cases, no cause was given. In five cases, an operation was successful; five patients died. The gluteal artery itself was tied three times, the internal iliac six times, and the common iliac once. The common iliac artery has been tied, according to the author, about eighteen times, for various accidents and diseases. In six cases, the patients recovered; in the others, death ensued in periods varying from two hours to eight months.

CASE X. *Aneurism of the pulmonary artery; death.* Lancet, 1841, vol. xxxix.

TO THE EDITOR OF THE LANCET.

Sir:—I am not aware that any surgical author or pathologist has hitherto noticed the occurrence of aneurism, in any other than the systemic vessels; and I was, therefore, not a little surprised and interested at finding, the other day, in a post-mortem examination which I made of a case of hæmoptysis, a well-marked example of aneurism of a branch of the pulmonary artery.

A priori, one would have thought that the thinness of the coats of the pulmonary arteries, their close proximity to the heart, and the great liability of the pulmonary tissues to diseased action, would have rendered these vessels especially obnoxious to aneurisms; though we are compelled to adopt an opposite conclusion, from the negative testimony which the silence of previous writers affords. It is possible, however, at the same time that we admit the infrequency of the disease in this system of vessels, that, from the necessarily hurried manner in which pathological investigations are often conducted, and from the attention of the profession not having hitherto been directed to the subject, cases may now and then have been overlooked.

I will briefly narrate the case which has occurred in my own practice. About three months since Mr. M., ætat. 41, of spare and strumous habit, complained of wheezing breathing and cough, accompanied with frothy mucous expectoration. There was no febrile excitement, the pulse ranged from 90 to 100, appetite deficient; he continued to follow his employment. Considerable relief of the symptoms followed the administration of soda with hydrocyanic acid and opium; and he did not consult me again till the 12th of December, when he experienced a sudden attack of hæmoptysis, coughing up, all at once, about half a pint of venous-looking blood. The hemorrhage recurred, to about the same amount, several times during the week following; and there was then an arrest of it till the 25th of December, when I was summoned to him in great haste, and found him *in articulo mortis*. He died suffocated; the quantity of blood at the last eruption not exceeding what had escaped in the former attacks. From the first bleeding, I had looked upon the case either as one of aneurism, which had burst into a bronchial tube, its fibrinous coagulum plugging up the opening from time to time; or that some considerable vessel had given way in a tubercular cavity.

The *autopsy* disclosed the following appearances in the thoracic cavity: The lungs collapsed fully, were slightly emphysematous at the bases of the lower lobes; and there were some old pleuritic adhesions, most firm at their apices. There was a trifling sprinkle of miliary tubercles, and several

cavities of the size of a walnut, in the upper lobes. In the left upper lobe was an evacuated cavity, two inches in diameter, and into it was seen jutting a distinctly defined aneurismal sac, as large as a nutmeg, which had burst by a cleft-like opening. The parietes of the sac were thin, and it did not contain any fibrinous layers. A vessel, the size of a small crow's quill, leading from a considerable trunk of the pulmonary artery, was distinctly traceable into the sac. The heart, with the exception of being unusually fat, was healthy; neither was there any morbid appearance in the aorta, or the large trunks given off from its arch.

I need not suggest the attention of the profession to the more minute examination, for the future, of the state of the bloodvessels in pulmonary hemorrhages.

I remain, sir, your obedient servant,

S. W. FEARN, Surgeon, F. G. S., &c.

Derby, January 1, 1841.

CASE XI. *Aneurism of the arch of the aorta; death; Mr. Liston's case.*
Lancet, 1847.

In the early part of the summer of the present year, Mr. Liston first complained of a feeling of constriction at the top of the windpipe, and a sense of choking when stooping forwards. It was also noticed by those constantly in his company that he had a manifest, though slight, difficulty in swallowing. This difficulty appeared most palpably, when swallowing the last drops of a glass of whatever he was drinking. He occasionally remarked this himself, but seemed to think very slightly of it. He had also, occasionally, a most peculiar cough, harsh, dry, and grating; this, however, was so seldom, that it gave him but little uneasiness: in short, he may be said, so far as appearances went, to have been in fair health. He lived, as usual, generously, and took his customary long morning walks.

It was late in July that the first serious and alarming symptom occurred, while receiving visits from patients at home, and when perfectly quiet, he suddenly felt his mouth fill with fluid, and retiring into his dressing-room, he coughed up between thirty and forty ounces of florid arterial blood; it was expelled almost without effort; the blood was in one clot and without froth or mucus; fainting came on, and the hemorrhage ceased. He soon recovered, and remained quiet during the remainder of the day. Drs. Watson and Forbes visited him, and examined the chest, but could detect nothing morbid either in the lungs or circulation; the source of the bleeding was therefore very obscure. He himself hinted that there might be an aneurism; but in the absence of all physical signs of such a lesion, the most favorable view was taken of the case, and it was conceived that it might be a salutary relief of a congested lung. From that moment he lost all the sense of choking and constriction in the throat, and was in fact better in health than previously. The only treatment adopted was local abstraction of blood by cupping, spare diet, and less violent exercise. With these restrictions, he continued his ordinary avocations till the beginning of October, when the cough returned. It was at first thought to be a mere catarrhal affection from exposure to cold; for some weeks he paid no particular attention to it, till it became more frequent and distressing, attended with expectoration, which was difficult, small in quantity, and of a rusty color, occasional dyspnoea supervening.

Drs. Watson and Forbes were again consulted. Bloodletting, counter-irritation, and confinement to the house, were had recourse to, and were followed by a marked alleviation of his symptoms, and on the 28th of November he resumed his professional occupations and rode out on horseback. December 1st, whilst at the house of a patient, he was seized with what appeared to be

a fit of spasmodic asthma; he returned home immediately, and soon recovered. In the evening he had a still more severe attack, and from that period to the time of his death he was unable to assume the recumbent posture.

Dec. 2. The dyspnœa returned; the usual remedies were administered, but without much benefit; in one of the attacks he inhaled chloroform, but to no purpose; there was no constitutional disturbance or pain.

3d. Fits of dyspnœa somewhat less urgent; the greatest relief was obtained from opium; the physical signs were still obscure; percussion and auscultation pointed out no perceptible lesion of the lungs or heart, but from the loud, noisy, prolonged inspirations, it was conjectured that the dyspnœa was dependent on mechanical pressure upon the trachea or bronchi.

4th. The breathing throughout the day was more labored, and with occasional fits of coughing and difficulty in deglutition; the pulse rose to 100 and became somewhat hard. In the evening Dr. Latham was associated in consultation; it was resolved to take away more blood, and the loss of twenty ounces afforded the greatest relief; the breathing became easier, the dysphagia diminished, and with the aid of half a grain of muriate of morphia, he passed a quiet night.

5th and 6th. There was no particular difference in the state of the breathing, but it was manifest that his strength was rapidly sinking. Sir B. Brodie saw him in consultation. He continued, however, to get weaker, and died at half past ten o'clock on the evening of the 7th, soon after a paroxysm of dyspnœa.

Post-mortem examination, thirty-six hours after death.—The thorax was examined by Mr. Cadge, in the presence of Sir B. Brodie, Drs. Watson, Latham, and Forbes, and Mr. J. Dalrymple. The lungs were found but slightly collapsed, congested throughout, but otherwise perfectly healthy; the pericardium contained about an ounce of transparent yellowish serum; the heart itself was healthy, saving a slight atheromatous deposit in the mitral and aortic semilunar valves; on removing the subelavian vein and areolar tissue from the arch of the aorta, the cause of death became at once apparent. An aneurism as large as an orange, flattened from before backwards, was seen pressing back the trachea; it arose from the upper part of the arch, close behind the left carotid artery, at the origin of the innominate, which seemed almost to commence from the aneurismal pouch; the communication with the aorta was by a circular opening, as large as a half-crown. On opening the trachea from behind, the mucous membrane was seen to be very dark and congested, and in its front part, where it was firmly connected to the tumor, there were three or four whitish prominences, as large as split peas, situated between the rings; it was at first difficult to understand what these elevations really were, but on slitting up the pouch and removing the fibrinous laminæ, they were drawn from between the rings, leaving the latter quite bare, and the trachea perforated in three or four points; they were, in short, portions of the clot, which half filled the sac of the aneurism. The source of the hemorrhage and the cause of death was at once explained.

CASE XII. *False 'aneurism after venesection at the bend of the elbow, cured by forced flexion.* Lancet, 1852.

M. A. Thierry has lately published, in the *Revue Clinique*, a case of false aneurism at the bend of the elbow, occurring after bleeding from the arm, which he successfully treated in the following manner: The arm was forcibly flexed, the limb carried over the head, and the hand fixed on the opposite cheek. The patient remained in this painful position for five days, after which time it was changed to that which M. Velpeau generally adopts for

fracture of the clavicle, viz: the arm fixed across the chest, and the hand resting on the opposite shoulder. A fortnight after the beginning of this treatment, the tumor was reduced to the size of a nut; the arm was then kept in the same position for another fortnight, after which no sign of any pulsating tumor remained. M. Nélaton, who saw the patient, considered the case a very remarkable one, as the aneurism has disappeared, and the vessel remains permeable at the seat of the wound. M. Thierry very justly says, that one case is not sufficient to prove the efficacy of any method of treatment, but that the results here obtained are well worthy of attention; he thinks that further trials will perhaps lead surgeons to treat aneurism of the limbs by forced flexion; femoral aneurism by flexion of the thigh upon the pelvis, and popliteal aneurism by flexing the leg upon the thigh.

CASE XIII. Aneurismal tumors upon the left ear, successfully treated by ligatures to both carotids. By R. D. Mussey, M. D., Prof. of Surgery in the Miami Med. College, Ohio. Ohio Med. and Surg. Journal, 1854.

Early in November last, Luther Gordon, æt. 19, accompanied by his physician, Dr. Kramer, came from Indiana, with his head bound up, to this city, on account of aneurismal tumors upon his left ear, and was admitted into St. John's Hospital.

The cavity of the concha was occupied by a pouch which rose above the level of the antitragus; and another covering the tragus and extending some way anterior to it, and pushing outwards, was as large as a middle-sized nutmeg. Continuous with the upper part of this was a considerable elevation of the integument which covered the scaphoid fossa, and an inch and a half of the fossa innominata. Below the root of the ear, in the depression between the mastoid process and the ramus of the jaw, and partially covered by the lobulus, was a globular tumor of the same character, as large as a moderate sized Isabella grape. All these tumors, or pouches, were elastic, and compressible almost to obliteration, pulsated strongly, and seemed to have a communication with each other, like the portions of an arterial varix. The whole circumference of the ear was larger than that of the other, and its integument everywhere hypertrophied.

L. G. was of a medium stature, with auburn hair and hazel eyes, and, although somewhat delicate in appearance, had enjoyed from childhood a pretty uniform health. From birth there was a cutaneous nævus in front of the left ear, but it attracted no particular attention. About eight years ago small elevations of the integument were observed at the points already described as the site of the tumors, in which pulsation was perceptible, especially after exercise. This, together with the size of the tumors, slowly increased, until, a month before he came here, the posterior extremity of the pouch, occupying the fossa innominata, burst open, causing alarming hemorrhage. This was suppressed by compression; and, subsequently, when the bandage and compresses were removed, the crust covering the opening gave way, and a pulsating jet of arterial blood flowed.

With reference to the treatment of this case, the most promising course which presented itself was the ligation of one or both carotids. The success which followed the tying of the primitive carotid, by Mr. Travers, in 1809, for "aneurism by anastomosis of the orbit;" and in a similar case by Mr. Dalrymple, in 1813; and also the tying of both carotids, by Dr. J. Mason Warren, in a remarkable case of vascular tumor of the mouth, face, and neck, in 1846, afforded encouragement for this procedure; yet the case I had in 1829, in which I tied both carotids for a large vascular pulsating tumor on the vertex of the head, not having been cured until the tumor was dissected

away, left room for doubt whether in the present instance, the ligature of both carotids even, might not fail of accomplishing the end desired. I determined, however, to resort to the application of a ligature to one of these vessels, possibly to both. The patient had been kept chiefly on farinaceous food since the first outbreak of the hemorrhage, and it was now enjoined upon him to live wholly without animal food until the operation.

On the 18th of November, I tied the left carotid. The pulsation in the tumors ceased on tightening the ligature, and did not afterwards return. His food was strictly farinaceous, with water for his only drink. After the lapse of ten days, a little milk was allowed. No unpleasant symptom occurred, except that when he began to sit up, which he was permitted to do in twelve days, he complained of indistinctness of vision in the left eye. It continued for several days, though less and less marked, until ultimately it subsided altogether. This symptom, indicating a defective supply of blood to the visual apparatus, has been sometimes observed, but I had not myself before noticed it in either of the six cases in which I had applied a ligature to the common carotid. A slow reduction of the tumors took place; but as it was quite doubtful whether a cure would follow, I proceeded, in four weeks, to ligate the right carotid. A slight effect was observed on the vision of the right eye, when the patient began to sit up, similar to what had taken place with the other.

The two operations were performed while the patient was asleep from the inhalation of a mixture of chloroform, one part by measure, and washed ether, two parts. Both arteries were tied just below the crossing of the omo-hyoid muscle. One ligature came away in sixteen days, the other in twenty. After the second operation the reduction in size of the tumors was much more rapid. In about three weeks, collodion was applied and repeated every two or three days. This seemed very much to promote the contraction of the pouches, and on the 28th of January, viz., seven weeks from the last operation, J. G. left for home with scarcely a vestige of the tumors remaining. I considered the result of the operations to be a permanent cure.

The last of April, three months after the patient went home, one of his physicians, residing near him, called on me, and gave the assurance that there were no remains of the swelling, and that he regarded the case as perfectly cured.

CASE XIV. *Aneurismal tumor of a branch of the left epigastric artery bursting into the scrotal sac; vessel ligated; recovery.* By M. Z. Kreider, M. D., of Lancaster, Ohio. Ohio Med. and Surg. Journal, 1848.

George Hanstein, aged 48 years, stonecutter, presented himself for relief, June 27th, 1841. The following is the history of this case: About twelve years ago, while engaged in turning a large granite block, one corner of the stone came in violent contact with the os pubis on the left side of the root of the penis. A stinging pain was felt for some time after the accident. A few days afterwards, a small pulsating tumor (about the size of a hazel-nut), was found to occupy the seat of the injury. This tumor very slowly enlarged ever since that time, until it attained the size of a large hen's egg. It has at no time been a source of much inconvenience. A week since, the man went to bed as usual: about midnight he awakened suddenly, feeling a stinging pain about the place of the tumor, and putting down his hand to the part, was surprised to find that the tumor had disappeared. He soon, however, discovered that the scrotum was much enlarged, and that this enlargement was rapidly augmenting. The following are the dimensions of the scrotum at this time: length, two feet; circumference near apex, seventeen inches; at

middle, twenty-two inches. Upon making an incision into the serotum upon the left side, a large quantity of partially coagulated arterial blood escaped. Finding that the hemorrhage still continued, I dilated the wound upwards, and found the bleeding vessel to be a branch of the epigastrie—and was the vessel which had been originally injured, forming an aneurism, whose walls giving way, had suffered the blood to escape and find its way into the serotal sac. The vessel was secured by ligature, the coagula entirely removed from the serotum, the wound closed by interrupted sutures and adhesive strips: some slight suppuration followed; but in a few days the parts healed, and the man speedily and perfectly recovered.

CASE XV. Ligature to the abdominal aorta; patient lived to the eleventh day. By Prof. Candido Borges Monteiro, of Rio de Janeiro. *Virginia Med. and Surg. Journal*, 1853.

This case, which is the fourth of the kind on record, occurred so long ago as November 5, 1842.

The patient was a man, aged 31, and suffering from what appeared to be aneurism of the right common iliac artery. The symptoms had first declared themselves after a long ride on horseback.

The operation having been agreed to by his colleague, M. Monteiro made an incision from the left antero-superior spine of the ilium to the tip of the last free rib, in which the superficial fascia, the oblique and the transverse muscles, and the fascia, were successively divided. He then exposed the aorta behind the peritoneum by breaking down the intervening areolar tissue; and the peritoneum and its contents having been raised by the hand of an assistant, he passed the ligature by means of a long needle and tied it in a double knot. After this he closed the wound in the parietes by three twisted sutures.

Immediately upon the tying of the ligature, the pulsation ceased in the tumor, and the inferior extremities became cold; but four hours afterwards, the coldness had passed off, and the temperature had risen a little beyond the natural point. During the two following days nothing remarkable occurred, and the only point of interest in the report is that the lower limbs were not paralyzed. On the 8th, there were slight pulsations in the lower part of the tumor, and in the femoral ring. On the 9th, these pulsations were more marked. On the 12th, the wound in the parietes had healed, except at the point occupied by the ligature connected with the aorta. On the 14th, about two ounces of red blood escaped by the side of the ligature, the pulse was small and frequent, the skin clammy, and the lower extremities cold. On the 15th, there was fresh hemorrhage by the same channel, together with extreme feebleness, and great pain in the right iliac region. On the 16th, the hemorrhage recurred, with vomiting and hiccough, and the patient died.

The *post-mortem* examination revealed no sign of inflammation in the peritoneum. The aorta had been tied about four lines above its bifurcation, and an inch below the inferior mesenteric branch. Above the ligature the vessel was empty, and the fatal hemorrhage was found to have issued from an opening in its coats corresponding to the knot of the ligature. The tumor, which was found to be false aneurism, appeared to have originated in a small rupture of the femoral artery, about an inch below Poupart's ligament, and from this point the blood had wormed its way into the neighboring intermuscular areolar tissue of the thigh and upwards, under Poupart's ligament into the iliac fossa, and thence behind the peritoneum to the back of the liver and the under surface of the diaphragm. The right common and external iliaes were red, friable, and seated in the upper and inner side of the tumor.

CASE XVI. *First successful ligature to the common iliac artery; applied for aneurism of the right external iliac.* By Valentine Mott, M. D., Prof. of Surgery, New York City. American Journal Med. Sciences, 1827.

A detailed account of the first operation ever performed upon the *arteria iliaca communis*, for the cure of aneurism, and especially of the first attempt to apply the ligature to so great a vessel, without dividing the peritoneum, may prove interesting to the profession generally, and must be immediately serviceable to practitioners of surgery. It is therefore as an act of duty, rather than of choice, that the following statement has been prepared, during such few and brief intervals of leisure as could be obtained amid the daily engagements and solitudes of business.

On the 15th of March, 1827, I was requested to visit a patient with Dr. Osborn (of Westfield, New Jersey, about twenty-five miles distant from New York), whom we found laboring under a large aneurism of the right external iliac artery.

Israel Crane, aged thirty-three years, by occupation a farmer, of temperate and regular habits, having generally enjoyed excellent health, says that about the middle of January he felt some pain about the lower part of the belly, which he attributed to a fall received during the winter. He is in the habit of using great efforts in lifting heavy logs of wood, as his employment at this season consists in carrying wood to market. It, however, was not until a fortnight since, that he perceived any tumor about the lower part of the abdomen. Upon examination, the abdomen on the right side was considerably enlarged from about the crural arch, as high as the umbilicus. When the hand was applied to the parietes of the abdomen, a pulsation was felt and rendered visible to some distance. To the touch the tumor beat violently, and appeared to contain only fluid blood. It commenced a little above Poupart's ligament, and reached, judging by the touch, from without, near the navel—inwards, almost to the linea alba—outwards and backwards filling up all the concavity of the ilium, and reaching beyond the posterior spinous process of that bone.

The rapid increase of this aneurismal tumor occasioned, as the countenance of our patient indicated, the most extreme agony. His sufferings at times were so great that his screams could be heard at a distance from the house. He had been bled several times, taken light food, and was kept constantly under the effects of opium. He was now informed of the serious nature of his case, and that without an operation very little chance of his life remained; with great composure he immediately consented to whatever would give him the best prospect of saving his life.

From the extent and situation of the tumor, he was apprised of the uncertain nature of the operation, as well as the difficulty of performing it, and indeed that it would require an artery to be tied, which never had been before operated upon for aneurism. With these views of his situation, he cheerfully submitted to be placed upon a table of suitable height in a room which was well lighted.

Then, in the presence of Dr. Osborn, Dr. Liddle, and Dr. Cross, the following operation was performed:—

The pubes and groin of the right side being shaved, an incision was commenced just above the external abdominal ring, and carried in a semicircular direction half an inch above Poupart's ligament, until it terminated a little beyond the anterior spinous process of the ilium, making it in extent about five inches. The integuments and superficial fascia were now divided, which exposed the tendinous part of the external oblique muscle, upon cutting which in the whole course of the incision, the muscular fibres of the internal oblique were exposed; the fibres of which were cautiously raised with the forceps, and

cut from the upper edge of Poupart's ligament. This exposed the spermatic cord, the cellular covering of which was now raised with the forceps, and divided to an extent sufficient to admit the forefinger of the left hand to pass upon the cord into the internal abdominal ring. The finger serving now as a director, enabled me to divide the internal oblique and transversalis muscles to the extent of the external incision, while it protected the peritoneum. In the division of the last mentioned muscles outwardly, the circumflexa ilii artery was cut through, and it yielded for a few minutes a smart bleeding. This, with a smaller artery upon the surface of the internal oblique muscle, between the rings, and one in the integuments, were all that required ligatures.

With the tumor beating furiously underneath, I now attempted to raise the peritoneum from it, which we found difficult and dangerous, as it was adherent to it in every direction. By degrees we separated it with great caution from the aneurismal tumor, which had now bulged up very much into the incision. But we soon found that the external incision did not enable us to arrive to more than half the extent of the tumor upwards. It was therefore extended upwards and backwards about half an inch within the ilium, to the distance of three inches, making a wound in all about eight inches in length.

The separation of the peritoneum was now continued, until the fingers arrived at the upper part of the tumor, which was found to terminate at the going off of the internal iliac artery. The common iliac was next examined by passing the fingers upon the promontory of the sacrum, and to the touch appearing to be sound, we determined to place our ligature upon it about half way between the aneurism and the aorta, with a view to allow length of vessel enough on each side of it to be united by the adhesive process.

The great current of blood through the aorta made it necessary to allow as much of the primitive iliac to remain between it and the ligature as possible, and the probable disease of the artery higher than the aneurism required that it should not be too low down. The depth of this wound, the size of the aneurism, and the pressure of the intestines downwards by the efforts to bear pain, made it almost impossible to see the vessel we wished to tie. By the aid of curved spatulas, such as I used in my operation upon the *innominata*, together with a thin, smooth piece of board, about three inches wide, prepared at the time, we succeeded in keeping up the peritoneal mass, and getting a distinct view of the arteria iliaca communis, on the side of the sacro-vertebral promontory. This required great effort on our part, and could only be continued for a few seconds. The difficulty was greatly augmented by the elevation of the aneurismal tumor, and the interception it caused to the admission of light.

When we elevated the pelvis, the tumor obstructed our sight; when we depressed it, the crowding down of the intestines presented another difficulty. In this part of the operation I was greatly assisted by Dr. Osborn and my enterprising pupil, Adrian A. Kissam.

Introducing my right hand now behind the peritoneum, the artery was denuded with the nail of the forefinger, and the needle conveying the ligature was introduced from within outwards, guided by the forefinger of the left hand, in order to avoid injuring the vein. The ligature was very readily passed underneath the artery, but considerable difficulty was experienced in hooking the eye of the needle, from the great depth of the wound and the impossibility of seeing it. The distance of the artery from the wound was the whole length of my aneurismal needle.

After drawing the ligature under the artery, we succeeded by the aid of our spatulas and board in getting a fair view of it, and were satisfied that it was fairly under the primitive iliac, a little below the bifurcation of the aorta.

It was now tied; the knots were readily conveyed up to the artery by the forefingers; all pulsation in the tumor instantly ceased. The ligature upon the artery was very little below a point opposite the umbilicus.

The wound was now dressed with five interrupted sutures, passing them not only through the integuments, but the fibres of the cut muscles, so as to bring their divided edges together at all parts of the incision, which was muscular. Adhesive plaster to assist the stitches, lint and strips to retain it, completed the dressing. The operation lasted rather less than one hour.

He was removed from the table and put into bed upon his back, with the knee a little elevated upon pillows to relax the limb as much as possible, and to avoid pressure upon it. It was considerably cooler than the opposite leg, and flannels were applied all over it, and a bottle of warm water to the foot. From the habit he had been in of taking largely of anodynes, a teaspoonful of the tinct. opii was administered, with directions to repeat it in an hour if the pain should be severe.

In less than one hour from the operation, considerable reaction of the heart and arteries took place; he felt, as he stated, altogether relieved from the excruciating agony he had suffered since the aneurism commenced. The whole limb had now recovered its natural temperature.

March 16. The day after the operation, pulse 80; skin moist; limb warm as the other; complains of some pain at the ligature; ordered a purgative of neutral salts.

17th. Pulse 80, and fuller than yesterday; took $\bar{3}x$. of blood from his arm; skin moist; tongue brown; considerable uneasiness in the limb; no pain at the ligature; leg of natural heat; salts had a good effect.

18th. Pulse 75; skin moist; tongue white; pain in the limb considerable; no pain at the ligature or in the wound; limb warm.

19th. Bled him to-day to ten ounces, the pulse being tense and beating eighty strokes in a minute; repeated the cathartic; suppuration appearing to have taken place, the dressings were removed.

20th. Pulse 70, and soft; skin moist; wound looks well; pain in the limb continues; leg warm as the other; cathartic operated well.

21st. Pulse 70, and soft; wound looks well; repeated the laxative; pain in the leg rather less; continues warm. There has been at no time tension of the abdomen or any particular uneasiness in that part. The patient thus far has been altogether more comfortable than could have been imagined. He takes more or less opium daily, from the long habit he has been in of taking anodynes.

26th. No unpleasant symptom; wound looks well; bled again to $\bar{3}xij$., as there was a little tumefaction and inflammation about the wound.

30th. Our patient continues to do well; wound dressed daily.

April 3. Not being able to leave the city, I requested Dr. Proudfoot, my late pupil, and a most promising young surgeon, to visit the patient. He reports that he was free of fever; wound all healed but where the large ligature was passing. The ligature appearing to be detached, the Dr. took hold of it and removed it; this was on the eighteenth day from the time of its application. Limb of the natural temperature; enjoined upon him to keep very quiet and in bed.

8th. There are no disagreeable appearances whatever; he appears to be doing remarkably well; has been bled once since the last report; takes a purgative every other day, and an opiate every night; pulse as in health; no pain; says he is entirely comfortable; wound is dressed with dry lint.

16th. Has improved rapidly since the last report. Two days after the liga-

ture came away, he very imprudently got out of bed, without experiencing any difficulty, except weakness. Rode out to-day; wound perfectly healed.

26th. He has been using crutches for a few days to favor the lame leg, which, as yet, feels rather weak. General health greatly improved.

30th. Is perfectly restored in health; has a little stoop in his walk, which he says is occasioned by the external cicatrix. Leg is not yet of its full size, nor quite so strong as the other. From the period of the operation to the recovery of our patient, he did not appear to suffer more pain, or have more unpleasant symptoms than would ordinarily take place in a flesh wound of equal extent. Much of this, in my opinion, is to be attributed to the prompt and judicious antiphlogistic treatment pursued by Dr. Osborn, to whom I am indebted for the daily reports of the case.

May 29. My patient visited me to-day, having come twenty-five miles; he was so much improved in health that I did not recognize him. Examined the cicatrix, and found it perfectly sound; could not discover any remains of aneurismal tumor; felt the epigastrie artery much enlarged and beating strongly, and a feeble, though distinct pulsation in the femoral artery immediately below the crural arch. The leg has its natural temperature and feeling, and he says it is as strong as the other.

Much credit is due the patient for his firmness on the occasion; although apprised of the great danger attending so formidable an experiment, and the uncertainty of its result, yet with a fortitude unshaken, and a full conviction that it was the only chance of prolonging his life, he cheerfully and resolutely submitted to the operation.

The gratification his visit afforded me is not to be imagined, save by those who have been placed under similar circumstances. The perfect success of so important and novel an operation, with the entire restoration of the patient's health, was a rich reward for the anxiety I experienced in the case, and in a measure compensated for the unexpected failure of my operation on the *arteria innominata*.

CASE XVII. *Ligature to the primitive iliac, for aneurism of the left external iliac.* By Prof. Salomon, of St. Petersburg, Russia. *Lancet*, 1827, vol. xxxiii.

Ligature of the primary iliac for aneurism of the external iliac artery, has, as far as we know, been performed three times. The first operation was successful in the hands of Valentine Mott, of New York; the second was performed by Mr. Crampton, of Dublin, but the patient died of hemorrhage on the eighth day. In the third case, Mr. Guthrie tied the common iliac, for supposed aneurism, which, after the patient's death, turned out to have been fungus hæmatodes. We are happy in being able to communicate a second successful example of this formidable operation, which was recently performed at St. Petersburg, by M. Salomon.

Lue Padurbusr, 38 years of age, of good constitution, had received, six months before his entrance into the hospital, a kick from a horse in the left groin; shortly after the injury, a tumor appeared in the inguinal region, and increased so rapidly as to impede progression, within a short period of its appearance. The patient was transferred to a clinical ward on the 24th of May, 1837, and on examination the following particulars were noted: Voluminous tumor, occupying the left inguinal region, not well defined; it extends four finger-breadths below Poupart's ligament, and as many above it; externally, it reaches the anterior superior spine of the ilium, and internally it touches the linea alba and pubes. The pulsations of the tumor are very perceptible to the eye and touch; they are strongest at about two inches above the liga-

ment; here the skin is very much distended and thin; the stethoscope detects a bellows-sound. The tumor can be traced into the abdominal cavity, along the line of the external iliac artery, as far as its origin; on compressing the abdominal aorta, the tumor becomes smaller, and its pulsations cease. The patient keeps the thigh flexed; the least attempt at extension causes severe pain, which shoots along the external side of the thigh to the ham and leg. Pulse quick and full. The nature of the disease, and the necessity of an operation, being manifest, the latter was performed on the 26th of May, in the following manner:—

An incision, four and a half inches long, was made, on the left side of the abdomen, extending from the anterior superior spine of the ilium to within an inch of the last false rib. The incision was commenced at an inch on the inner side of the spinous process, and ran in a parallel direction with the inferior (*internal*) epigastric artery. The superficial fascia and the fleshy fibres of the abdominal muscles were next divided in the same direction, and Cooper's fascia brought into view. A small opening having been made into this fascia, it was divided for some extent, at the lower part of the wound. The peritoneum now lay bare, and was carefully separated, with the finger, from the fascia covering the iliacus muscle, and then from the psoas muscle. An assistant now fixed the peritoneum and intestines, by pressing them with the index-finger against the upper part of the wound, and this done, the operator continued to separate the peritoneum, until he arrived at the common iliac artery; the pulsations of the vessel, which appeared to be healthy, were distinctly felt under the finger. Having ascertained, with precision, the exact direction of the artery, by means of the touch (for it was impossible to see it in the bottom of the wound), the operator now separated the iliac vein from the artery with the left index-finger, and then succeeded in passing an aneurism needle along the same finger, under the artery. The vessel was completely isolated from surrounding parts, with the aid of the needle, and then, by means of Deschamps' elastic needle, a ligature was passed round it, from the inner to the outer side. The ends of the ligature were tightened with the common double knot, and brought out at the nearest part of the wound. This step of the operation was not attended with any difficulty. On tying the knot, pulsation ceased in the tumor, and it rapidly diminished in volume. The edges of the wound were brought together by strips of adhesive plaster; some pledgets of lint were placed along it, and the whole supported by a common bandage. The patient lost very little blood during the operation, as none of the vessels divided required a ligature.

On the evening of the 26th, the pulse was quick and full, but the patient expressed himself much relieved. Fourteen ounces of blood were taken from the arm, and fifteen drops of laurel-water administered every three hours. Lemonade for drink; draught containing cream of tartar at night.

27th. Pulse quick; no stool. An evacuation was produced by the administration of some castor oil. The lower extremity, which was at first cold, is now warm. The patient now complains of pain in the inner side of the knee, which is swollen, hot, and red; ten leeches to the affected part; warm fomentations.

29th. The inflammation of the knee has diminished; the skin here is much cooler than on the 27th; a superficial gangrenous eschar has formed over the fifth metatarsal bone. Some lint, moistened with spirits of turpentine and camphorated spirit of wine, was immediately applied to this point. The general condition of the patient is favorable; he has slept several hours; pulse less quick.

30th. The patient has slept tranquilly during the night, and feels himself

strong; pulse soft, 80; skin cool; tongue clean; stools natural; the left lower extremity is warm; the aneurismal tumor has considerably diminished in size. On removing the dressings, the wound presents a favorable aspect; the greater portion of it is united by the first intention; a small portion near the ligature furnishes pus, which is of good condition. As the swelling at the knee had again become painful, twelve leeches were applied.

31st. Has passed a quiet night; the knee less painful; the eschar on the foot is limited, but a similar eschar has formed over the skin covering the patella, which is inflamed. Suppuration of the wound continues slight.

June 2. Tumefaction of the knee is more painful; twelve leeches applied, which removed it altogether. Another small superficial eschar occupies the external part of the sole of the foot. The general condition of the patient, and that of the wound, are most satisfactory.

From this period the patient continued to improve, and near the end of June the tumor had subsided to one-quarter of its original volume, being converted into a hard solid mass. The temperature and sensibility of the limb were normal, except at the toes and sole of the foot, which still remain numbed. The whole of the gangrenous spots are healed. On the thirty-second day after the operation the ligature came away, and the wound then quickly healed in its whole extent. At the expiration of two months the patient was completely cured.

CASE XVIII. *Ligature to the common iliac artery, and the subsequent appearance of the parts.* By Edward Peace, M. D., Surgeon to the Pennsylvania Hospital. Transactions of the American Med. Association, vol. i.

The artery was tied August 29th, 1842, and the patient was discharged cured on the 8th of October. Five months after it was done, the tumor, which had been very large, was found to be hard, was greatly reduced in size, and continued free from pulsation. He returned to a laborious occupation, and in November, 1843—fifteen months after the operation—his attention was directed to a reappearance of the tumor. He now presented himself to his surgeon, who found it soft, fluctuating, and of the volume of a small orange, with the integuments covering it discolored. He was readmitted into the hospital, and in a few days ulceration took place, and he died after repeated hemorrhages. After his admission, ligature of the aorta was suggested, with a view of prolonging life, but it was found that pressure on this great trunk at its lower part did not arrest the flow of blood, and was, of course, abandoned. The pelvis, which was bequeathed to Dr. Peace, is now in his possession, and shows that the ligature had been placed upon the iliac vessel just above its bifurcation—a point at which it was perfectly sound—and that the hemorrhage was due to the return of blood into the tumor by the collateral vessels. These vessels being given off by the aorta, above the point at which it is prominent upon the vertebræ, and where it had been compressed in the examinations which were made.

CASE XIX. *The first ligature applied to the carotid artery in Great Britain.* Lancet, 1832, vol. xxiii.

July 14, 1832. Mr. Lynn attended with his usual punctuality, but there were no operations to perform, and he made a few conversational observations on the excision of tumors. "Forty years ago I was in the habit of frequently cutting out tumors, especially on the side of the face and neck, and the results were generally fortunate. I have often had some nice and difficult dissection on these occasions, and have had as many as four nerves at a time supported on the back of the fingers of my operating hand. My good fortune ex-

cited the emulation of my colleague Mr. Morell, who was a 'good creature,' but not the most brilliant of surgeons; and he said to me one day, 'Lynn, you are always cutting out tumors, why can't I do the same?' Quoth I, 'There is no reason in the world why you shouldn't.' 'Well, then,' he said, 'I have an elderly woman who has diseased parotid gland, and I shall cut it out.' I replied that 'I had never done that, and I did not think it an eligible case, for a commencement especially.' However, he would have his own way, and he set about the operation very manfully, and did it very well; but I do not believe he actually cut out the entire gland, neither do I think it has ever been done completely by any one, before or since that time; and I told Sir Astley Cooper so, the other night, at the College, when he was relating some of his cases. Well, to return to poor Morell, *he cut out* either the whole or part of the parotid gland, and put ligatures upon several vessels, but the ligatures slipped away, and hemorrhage occurred several times. As the poor woman was much exhausted by this loss of blood, Morell endeavored to pucker up the wound, and involved it in a general ligature, but all his expedients proved vain, and the patient continued to lose blood almost every day for a fortnight. The fact is, he had cut off the arteries so near their main trunk, that he had left no room for a proper ligature. Foiled in all his attempts, Morell at last came to me, and asked what he should do. I answered that the woman had lost so much blood, and was so much reduced in consequence, that it was doubtful if anything could save her.

If the hemorrhage were not arrested, she must inevitably die in a day or two. Local ligatures were perfectly inapplicable. Cruickshank had lately been tying the carotids of dogs, and I saw no reason why the same operation should not be performed with impunity in the human subject, and if he liked I would undertake to tie the primitive carotid. I accordingly cut down upon this artery just below its bifurcation by the side of the larynx, and found no difficulty in penetrating through the skin, platysma myoides, fascia, and sheath, and in ultimately tying the vessel with a single ligature. The hemorrhage instantly ceased, and no unusual effect was observed in the patient. She lived a fortnight after the operation, and died evidently of the debility induced by the hemorrhage and her previous sufferings. The case was fatal, but I felt satisfied that the principle of the operation was established. This I believe to be the first instance of ligature of the carotid, and it certainly occurred long previous to any case that is recorded."

CASE XX. *Ligature to the femoral vein.* By the late Professor Roux, of Paris. Gazette des Hôpitaux—New Orleans Med. and Surg. Journal, 1854.

At a meeting of the Surgical Society of Paris, on the 27th of July, the late Prof. Roux asked leave to communicate an observation which had recently occurred in his practice. A patient had been operated upon twenty-eight days previous for a voluminous tumor, occupying the whole of the inguinal region, and descending into the scrotum. The tumor was composed of various elements, but contained no cancer cells; it had relapsed five times. It had been removed four times by Chelius; it first appeared eight years ago; the last operation was done ten months since. The constitution was not impaired.

After having dissected the tumor superficially, when it was necessary to separate the deep-seated portions, the surgeon avoided the artery, which it was necessary to dissect for a considerable extent, but it was not possible to avoid the crural vein, and this was opened. I thought it best, said M. Roux, to place a ligature above and below the wound. This was above the junction of the saphena. At the moment I applied the ligature the limb became livid

and cold, but on the following day the coloration was less, and the temperature was normal. On the third and fourth days a considerable œdema supervened, invading the limb quite up to the hip. A few days afterwards erysipelas came on, and passed through its regular stages; and then an abscess formed on the side of the foot. This was opened and readily healed up. At present the patient is in a very satisfactory condition.

The operation lasted two hours; the patient was under the influence of ether the whole time. The wound has nearly cicatrized.

This fact, although I was the first to call the attention of surgeons to the danger of wounding the femoral vein above the saphena, is perhaps unique, yet the accidents, says M. Roux, were altogether insignificant.

SECTION VII.

SELF-MUTILATION.

CASE I. *Extraordinary case of suicide; patient thrusting a red-hot poker into the abdomen, and subsequently pulling out and detaching a portion of the omentum and thirty-two inches of the colon.* By S. Nicolls, M. D., of Ireland. Dublin Med. Press, 1854.

On Sunday, the 20th of August, at 9 A. M., I was sent for to see Daniel Cashen, ætat. 69, a patient in the workhouse infirmary. On arriving, I found that this old man, during the absence of the ward attendant for the breakfasts (three bed-ridden old men with Cashen being then the only occupants of the ward), had left his bed, and went to the fire with a rug around him. After a short time, the attention of the other old men was aroused by the smell and noise of something frying. Supposing from the smoke that the rug or his shirt had become ignited, and that he was burning, they gave the alarm. The nurse and ward attendant having arrived, it was found he had passed a hot poker into his belly. On examination, I found, directly above, and about one inch and a half from the umbilicus, a hole about an inch in diameter, quite plugged up with omentum.

Satisfied that it would be futile to expect the charred edges of the wound to unite, and that attempting to return the omentum might be more injurious than beneficial, I covered the injured part with lint wet with ol. terebinth., put on suitable bandages, and ordered an anodyne mixture, a spoonful occasionally. When the charred portions of the omentum and abdomen commenced sloughing, the stench became most offensive. I then had liniment. calcis, with creasote, applied with good effect. At the end of a week the slough became detached, and the wound, now the size of a half-crown, presented an erysipelatous appearance. I then substituted ung. hydr. as a dressing, which was continued for three days. The inflammatory appearance having subsided, I applied wide and long strips of adhesive plaster above and below the wound, with the view of promoting the contraction of the orifice and retraction of the omentum. Over the wound I applied lint with liniment. calcis. His food consisted of milk, with a little bread and tea. I gave no aperients, as I considered the less the bowels were disturbed the better. In this way he progressed favorably for twenty-one days, so much so, that I was congratulating myself on the prospect of his ultimate recovery, the wound being reduced to the size of a sixpence, closed by a small button of omentum.

At 7 A. M. on the 11th of September, the twenty-second day after the burn, I was again called to visit him. On arriving, I found him apparently dying; there was a large quantity of blood on the floor, and the bed and bedding all bloody. On examining him, I found a large quantity of omentum

protruding from the wound, and blood still oozing; his hands all smeared with blood. The patients in the ward stated that the nurse had been, as usual since he burned himself, in to see him during the night, that the ward attendant had a candle lighted, and sat up with him until coming on day, when he went to bed for an hour, and on getting up at six, found him as described, he (Cashen) having in the meantime removed the bandages and adhesive plaster, and inflicted further injury on himself. He was so exhausted that I could not venture to have him removed to another bed, but had him made as comfortable as possible where he was. Whilst the nurse and ward attendant were arranging him, I observed something between the pallet and wall, which, on examination, I found to be a piece of detached omentum, about the extent of my hand, and a portion of the colon, thirty-two inches long, also quite detached. I again applied turpentine, and administered restoratives. I had no expectation that he could make any rally, yet, strange to say, he did, and lingered until 10 A. M. on the 19th instant, when he ceased to exist, having survived the second injury eight, and the primary one thirty days.

CASE II. *Recovery after cutting out seventeen inches of intestine (colon) and a considerable portion of the omentum.* By the late A. Brigham, M. D., Superintendent of the State Lunatic Asylum of New York. *American Journal Med. Sciences*, 1845.

This most remarkable case of self-mutilation was an insane female, aged 38, admitted at Utica, June, 1843. She was married, had borne children, and now labored under suicidal mania.

No material alteration in her case was noticed until October 24th, when about nine o'clock in the forenoon she obtained a pair of large *scissors*, that had been accidentally left in the hall, which she took to her room, and with which she made two wounds in her abdomen, one about an inch and a half above the umbilicus, the other half an inch below it. From the upper opening she took out part of the small intestines, from which she cut off a portion, *seventeen inches* in length, when she was discovered by another patient, and alarm being given, she was forced, not without some resistance on her part, to cease from further injuring herself.

Dr. Buttolph, the assistant physician, was near, and saw her immediately, and discovering that the intestine was entirely separated, and also a considerable portion of the omentum, and that one end of the intestine was withdrawn into the abdomen, concluded the case would soon prove fatal under any treatment, and therefore returned the end of the intestine that protruded into the abdomen, stitched up the wounds carefully, and covered them with adhesive plaster—applied a bandage around the body, gave her an injection of laudanum, and directed an attendant to remain with her constantly. While thus dressing the wound she vomited, but did not appear to have much pain.

On examining the detached intestine, which she had cut into in several places, it was found to contain a small quantity of feces, and weighed *one ounce and one drachm*; the omentum, which was separated from it, weighed *one ounce and two drachms*. The ends of the intestine were ragged, and had been cut off obliquely. For a few days she was disposed to vomit, and was not able to retain anything in her stomach but a trifle of water. Injections of laudanum and broth were administered, and she was kept constantly quiet. After a few days she called for food and was able to retain a very little, and in about ten days she asked if she "had not ought to take some physic." She was reminded of the accident, and told that it would be improper to give

her physie; but she did not appear to think so, and said she "felt as if it would do her good, and that she ought to have some."

She continued without much change, very quiet by aid of injections of laudanum, eating a little several times in the day, and vomiting occasionally, but without any marked tenderness or inflammation of the abdomen, until the 26th of November, *thirty-three* days after the accident, when she had a small discharge from the bowels of hardened feces, and on the next day a copious one. This, she said, gave her great relief, and from this time she began to improve. The wounds had already healed, and she was soon able to walk about. Since then she has continued to have regular evacuations from the bowels, though there is rather a tendency to diarrhœa, for which she often takes laudanum.

She now eats tolerably well, though inclined to vomit when she eats heartily. She is able to be about the house, and sews and knits some, and is as well as she was for several weeks previous to the injury. She is, however, still feeble, and does not gain flesh, but is calm and quiet, though her mind is in rather a demented state.

Sequel to the above case. By Dr. Brigham. Same journal, 1846.

The readers of this Journal will recollect the case referred to. I wish now to inform them that the patient died on the 2d day of April, 1845, about six months after the removal of the intestine, which occurred October 24, 1844. The patient, Mrs. W., was able to be about the house and to work some until the 1st of March, when her strength and flesh began to fail, and she complained occasionally of sickness of the stomach, and pain and tenderness of the abdomen, which was somewhat bloated. The bowels continued regular, though with some tendency to diarrhœa, which was easily controlled by enemata of laudanum. Her death was not preceded or accompanied by any remarkable symptoms, and had we not known of the injury, should not have thought that her illness and death presented anything particularly singular, as many patients that have been long insane, die with diarrhœa and symptoms such as we witnessed in this case.

Autopsy.—On examining the body after death we found the membranes of the brain highly injected and thickened. The cortical portion of the brain was harder than natural, the medullary injected and of a grayish color. The phrenological organs of hope were small, while destructiveness and cautiousness were very large.

The abdomen was considerably distended, and on being opened a quantity of yellowish serum with flocculi of pus was observed within the cavity.

The peritoneal membrane in the region of the wound was highly congested, thickened, and adherent to the intestines, which in many places could not be separated from each other but with considerable difficulty.

The portion of the intestine removed at the time of the injury was found to be the colon: it having been divided about four inches from the entrance of the small intestine. The divided portions were drawn together at the place of injury and united by organized lymph, which also connected the intestines to the parietes of the abdomen where the wound was made. The passage between the divided ends of the intestine was small and crossed by a few ligament-like bands—but still large enough to permit the passage of semi-liquid feces.

Judging from the size of the intestine removed, which was diminished by being drawn out at a small opening, we had erroneously supposed, without particular examination, that it was a portion of the small intestine, and so stated in our former communication.

CASE III. *Death by voluntary burning.* By Dr. Bricheteau. Bulletin de l'Académie Impériale de Médecine—Virginia Journal of Med. and Surg., 1854.

M. P——, aged 36, having lost, shortly after his marriage, a wife whom he tenderly loved, was so deeply affected by this bereavement, that he fell into the profoundest melancholy. He believed that he saw the form of his beloved spouse amid the clouds, and that he heard her voice calling to him. These hallucinations were only momentary, and did not prevent M. P——, who was a magistrate, from fulfilling his public functions with exactness and decorum. He labored much at night, and nerved himself for his lonely tasks by small quantities of wine, and by the use of smoking tobacco, in which he indulged to excess.

At last he enjoyed a long interval of repose and mental calm, and thought of marrying again; but some difficulties which he encountered in contracting a new connection rendered the memory of his first wife dearer to him; his visions returned; he subjected himself to practices of exaggerated devotion, and read ascetic books, which only increased his periodical aberrations of intellect.

At this time Dr. Madin, of Verdun, was requested to visit M. P——. The patient received him politely, but informed him that he had no need of his services, that he was the elect of the Lord, and that a lofty destiny was reserved for him. M. P—— then spoke in respectful but incoherent terms of women; he adored them all, young or old. He had a divine mission, he added, to burn bad books and other objects offensive to morality.

This incendiary mania gained upon the unfortunate magistrate, who on several occasions set fire to his house, while undertaking to purify it with a lighted torch. When these paroxysms of true insanity were over, M. P—— was the first to laugh at his own extravagances, and appeared to have regained his reason entirely; his friends were thus lulled into a false security. Dr. Madin, however, noticed a slight incoherency of ideas, even in the patient's most lucid moments, and gave the strictest orders that he should never be left alone. His apprehensions were only too well founded.

On the 11th of January, 1836, at two in the morning, Dr. Madin was summoned to M. P——, who had voluntarily committed his body to the flames, in expiation of the sins with which he reproached himself. For this purpose, he had prepared a sort of funeral pyre in his kitchen; the smoke produced in the combustion of the fat of the poor lunatic had apprised his domestics of this tragic event.

He lay in the midst of a horrible smoke, which scarcely allowed him to breathe, calm and almost smiling. "Dear doctor, he said, I am going to rejoin my wife; I am worthy of her, now that I have expiated my horrible crimes at the stake. I have been two hours on the pile which God ordered me to construct; I have taken care to keep the fire burning by piling on faggots." The countenance of the patient, during this singular allocution, betrayed neither pain nor emotion of any kind.

Dr. Madin found that the lower extremities were consumed quite to the hips; the bones were calcined; the genital organs were carbonized, and the hands were reduced to deformed and blackened stumps. The remainder of the body was intact.

The patient had been enveloped in a sheet spread with ccrate for about ten minutes, when his voice, which had been so firm and resonant, became feeble of a sudden; the pulse failed; death was impending. Dr. Madin rapidly

removed the dressings, and found that one of the popliteal arteries, corroded by the fire, had given rise to a mortal hemorrhage.

The instrument of torture consisted of fifteen or twenty faggots, which the patient had artistically arranged in the fire-place of his kitchen. A great quantity of fat, mingled with blood, had flowed six or seven feet from the hearth.

This strange fact certainly merits a place in the annals of psychological medicine. M. Madin has only deferred its publication from respect for the feelings of relatives.

CASE IV. A young woman cutting off her left hand and tossing it into the fire, attempting to put out her eyes, and holding the right hand in the fire. Lancet, 1851.

It appears that the patient is a well-conducted servant girl, twenty-three years of age; she has light hair and complexion, and has been in service for the last nine months with a widow lady at Islington, where she never showed any signs of mental aberration. Her father was a bricklayer, who died from a severe cold caught in a well; her mother and sister are alive; and it would seem that no distinct signs of insanity have been known to exist in the family. The patient herself states very clearly that she was very happy in her situation, that she went to church every Sunday, and that she was in the enjoyment of good health. The catamenia have always been regular, and no uneasiness in respect to menstruation was ever experienced.

On the morning of the 7th of November, the mistress had left the kitchen but a short time when her attention was attracted to a very strong ammoniacal smell about the house. She inquired from the servant, whom she had just left below stairs, whether some linen was burning, and receiving no answer, she proceeded into the kitchen, where she found the girl before the fire with her left arm thrust into it. The mistress, who was naturally much alarmed, soon became aware that the hand had been completely severed from the arm, and was lying on the fire; and when anxiously inquiring for the cause of this frightful scene, the girl exclaimed that she had cut off her hand with the carving knife, and that God had told her to do so. When remonstrated with touching this sad mutilation, she seized a steel skewer, and attempted to destroy her own eyes by thrusting its point into them.

A surgeon, who had hurriedly been sent for, was soon upon the spot; and whilst he was endeavoring to take from the fire the severed hand which was lying upon it, the unfortunate creature rushed forwards, and thrust her right and only remaining hand into the fire. By this last and desperate act, she inflicted a severe burn upon the forearm and hand. She was finally conveyed to the hospital, a sad victim to a sudden and unexpected monomaniacal attack.

On examination, it was found that the left hand had been severed from the arm as cleanly as a saw could have done it, the only difference from an ordinary amputation being, that no soft parts had been left to cover the lower ends of the radius and ulna, which were quite exposed, with small fragments of cartilage still half attached, the whole being somewhat obscured by charring. It would appear that the bleeding was inconsiderable, and as no actual hemorrhage had to be stopped, it may be surmised that the charring to which the stump was exposed soon after the mutilation may have acted as the actual cautery. The left forearm was somewhat swollen, and on the right side the hand and forearm were found severely burned, the action of the fire having penetrated to the areolar tissue. The poor girl was keeping her eyes closed, and when the lids were separated it was

found that the skewer had principally wounded the conjunctiva and sclerotica, between the lower eyelid, the external canthus, and the globe; there was much infiltration between the tunics, but the iris was untouched in either eye.

The patient seems to be strictly *mono-maniac*, as she gives very apposite and satisfactory answers respecting her age, state of health, family, and various other circumstances. When questioned, however, as to the unfortunate mutilation she has inflicted upon herself, she invariably answers that God told her to do it. When closely pressed as to how she knew she ought to commit such an act, she appears wrapped in her monomania, and merely answers, "God knows."

On the second day there was some purulent discharge from the eyes; the stump, which had been simply dressed, and the right arm, which had been wrapped up in cotton wool, were rather painful; the bowels had been twice moved, and the patient had been tranquil, composed, and even inclined to sleep. When interrogated she does not seem displeased at being disturbed, and gives short and clear answers to the questions put to her; she does not cry out or mutter, but now and then moves the upper extremities slowly in different directions, and finally raises them above her head. The breathing is slow and regular, the carotids beat somewhat faintly and heavily, and when a certain pressure is made upon one of these vessels, the patient utters no complaint, nor do any cerebral phenomena become apparent.

Although the poor girl has been very quiet since her admission, she is watched with great vigilance, as she might suddenly be seized with a fresh monomaniacal and destructive fit. Mr. Lloyd ordered some calomel; and purposes, when the patient has been watched for a few days, to endeavor to render the stump a serviceable one. We shall watch the progress of this case with painful interest, and acquaint our readers with its subsequent features.

CASE V. A woman excising the external organs of generation; recovery from her insanity; a dreadful alternative. By Samuel M. McMinn, M. D., late Superintendent of the Tennessee General Hospital, Nashville. *Western Lancet*, 1844.

I was called to see Mrs. B., fifteen miles into the country, and was told by the messenger, to use his own language, "that she had been crazy for several years, and now had ruined herself with a razor." I found her visage bloodless, and pulse at the wrist almost imperceptible. Upon further examination I found her floating in blood. She had procured a razor, and secreted herself, commenced an operation upon her own body, as it appeared, by making a horizontal incision above the pubes, about four inches in length; then intersecting this, two other incisions, one on each side downwards on the insides of the thighs, so as to include the whole of the external organs of generation, and terminating the process by amputating or excising the whole of the external organ. The wound was so deep as to lay bare the ossa pubis, and wound, or perhaps remove, the external portions of the urethra and vagina. Taking into consideration the great loss of integument and blood, the necessary irritation of the urine passing over the raw surface, I thought it likely she would die. I dressed the wound with the most simple dressing, and ordered a dose of castor oil in the evening, if the bowels were not moved. During the whole time of my stay on the first visit, she was talking incessantly and unintelligibly.

I learned from her friends, that about six years previous to the above date, when she was about forty-two years of age, she ceased to menstruate; and a

few months afterwards became deranged, and had remained so ever since. In consequence of her derangement, her husband had abandoned her, and had not lived with her since.

The next day I visited her again, and found evident marks of returning reason. Her mind continued to improve, and in about three weeks her reason was perfectly restored. In about four months the wound completely cicatrized. From that time to the present I believe she has enjoyed the right use of her reason, and good health; and she and her husband live together in peace and good order.

I am pleased to call the attention of the profession to this case, as I presume there are a number of just such in existence. And the results of this case may suggest a remedy. Whether it was the great loss of blood, the removal of the external organs and the counter-irritation consequent, that cured the patient, is the question for the consideration of the profession. I have had the opportunity of making examinations in three different cases which I presume are quite similar to Mrs. B.'s, since her case occurred to me; and in each case I found the external organs of generation tumefied, indurated, and issuing a serous, aerimomious, and quite offensive fluid, indicative of considerable disease in the parts. But whether this condition of the organs existed before mental aberration was evident, or had set in at a later period, I am unable to determine.

CASE VI. *Amputation of the penis by a patient in delirium tremens.* New Orleans Med. and Surg. Journal, 1853.

A stout German, aged about 45 years, of good general health, but of rather intemperate habits, had, during the month of April, 1852, an attack of mania à potu, and whilst alone in his room, and fancying that his enemies were pursuing him to deprive him of his genital organs, seized a sharp knife, amputated his penis close up to the pubes, and threw the organ violently at those whom he fancied were in pursuit of him. The hemorrhage was considerable, but no vessels were tied, the bleeding gradually ceasing spontaneously, by the formation of a coagulum over the mouths of the divided vessels. About this time he was brought to the hospital, where he made an attempt to cut his throat. Simple dressings were ordered; the patient gradually recovered from the delirium, the penis healed rapidly, and we saw him on the morning of the 22d of May, when the wound had quite healed, and he was rational and apparently content with his extraordinary surgical feat.

This case is particularly interesting on account of the cessation of the hemorrhage without any surgical aid. We believe it is taught in the books that the vessels distributed to this organ always require the use of the ligature or torsion, when divided with a keen bladed instrument; here, however, the case was not brought to the notice of the surgeon for several hours after the violence had been committed, when all hemorrhage had entirely ceased.

CASE VII. *Self-emasculation in a married man.* By C. Gliddon Young, M. D., of Greenwood, Louisiana. Western Journal of Med. and Surg., 1846.

I was called, in the fall of 1837, to see Mr. P., a married man, in respectable circumstances, aged about 35 years, the father of five children, who, in a state of mental despondency, produced by religious excitement and domestic troubles, had emasculated himself. He was an exemplary member and class-leader in the Methodist church, and was much in the habit of shouting, which was so disagreeable to his wife that she required him to desist, on pain of

forfeiting his connubial rights. Shortly afterwards she discovered that he had deliberately sharpened his knife and maimed himself as above mentioned; taking out first one testicle and then the other, after the manner of castrating pigs. As he was ignorant of the danger of hemorrhage, or the means of guarding against it, he had cut the cord directly across, and both spermatic arteries were bleeding when I got to him. I found him almost exhausted from the loss of blood; he had fainted several times; the scrotum was filled with coagula. I quickly cleared the coagula from one side, and found that the cord had retracted so far within the abdominal ring as to be scarcely within reach; but a tenaculum introduced by the side of my finger enabled me to bring down and secure the bleeding arteries, which I did successively. By a little stimulus he was revived, and his recovery took place without a single untoward symptom.

CASE VIII. *Self-castration in a married man.* By John S. Holliday, M. D., of Fayetteville, Georgia. Southern Med. and Surgical Journal, 1848.

Mr. B—, aged about 30, passed through this place about two years ago, on his way to one of the lower counties of this State. Two miles from this village, he stepped aside from the road, and with a dull pocket-knife castrated himself, removing both testicles with a part of the scrotum. The hemorrhage was very great. He put the testicles in his pocket, and reaching a house in the neighborhood, desired to lie down by the fire. The bleeding on the floor attracting the notice of those around him, he informed them what he had done. Dr. Blalock and myself were called to see him, and found the hemorrhage had ceased by slight compression. The usual treatment, consisting of astringents, etc., was pursued in this case, and our patient had a rapid recovery. This act has cured him of his mental derangement, and he now repents most sincerely committing it. I have frequently seen Mr. B. since his recovery, and report him now to be fleshy and doing well. He has a wife, but I do not know that he lives with her.

CASE IX. *Self-excision of the whole of the scrotum and testicles.* Lancet, 1836, vol. xxx.

A man of the name of Morgan was admitted into St. George's Hospital a few days since, in consequence of self-excision of the whole of the scrotum and testicles, effected under feelings of the deepest despair, in consequence of being suddenly expelled from the workhouse of the parish of Twickenham, for the commission of some fault, to starve in the open air. A woman gave him shelter for three days, but sustenance she had it not in her power to bestow, and he was, consequently, during the whole of this period, without the common necessities of life. Repeated representations of his condition were made to the Acting Overseer, but without avail, and then in a fit of that maniacal excitement which sometimes attends utter despair, the poor forlorn, impoverished creature mutilated himself in the manner described. The vessels having been secured by the humane surgeon who was immediately sent for, in the absence of the parochial medical officer, the unhappy man was sent to St. George's Hospital. A fatal result was anticipated; and if it ensues, the facts must obtain a degree of publicity which will make thousands of others, besides our correspondent, exclaim, as he does at the close of his communication: "In God's name, what is to become of the wretched and sometimes improvident, but always to be pitied paupers of this country? Some overwhelming popular outburst will surely take place soon, which will not easily be suppressed."

(From the *Lancet*, 1836, vol. xxx.)

TO THE EDITOR OF THE *LANCET* :—

Sir: I have read the remarks of your correspondent in the *Lancet* of April 23, on the case of Morgan in St. George's Hospital. I saw the man very shortly after the mischief, and he was perfectly cool and collected; indeed he was so cool as to have wrapped up the excised parts in an old handkerchief, and placed them in his pocket. I could scarcely credit the fact until I saw the scrotum and testicles, which at "one fell swoop" of the razor he had excised most adroitly, by placing a piece of cord tightly round near the base of the penis. He was much exhausted by loss of blood and want of nourishment, and I expected that every pulsation would have been his last. A little brandy and water, with occasional renewal of the stimulus, aroused him, and I thought it better, as he was *houseless*, to send him at once to the hospital. The syncope was so great at the outset, that I had felt disposed to allow the handkerchief which he had pressed upon the wounded parts to remain, as the clotted blood effectually stopped the mouths of the vessels, and temporarily restrained hemorrhage. However, the parochial surgeon came, and, upon consideration, it was thought better to tie the vessels, and, most fortunately for the man, it was readily accomplished without much loss of blood; a few more ounces lost and the equilibrium had been destroyed. No one could have been more attentive than the parochial surgeon (Mr. Martin), for, fearing any secondary hemorrhage, he went up himself with the man to the hospital, and then left him safe.

It appears that Morgan had been allowed to go out on Easter Monday, and that he came home half intoxicated. There was a patient (a young girl) in the workhouse, half idiotic, or, which is more likely, troubled with nymphomania. She went into the man's room, and the temptation overcame him. He has been, however, a very troublesome man, but it would have been more advisable to have dealt with him legally. A man guilty of murder, in Newgate is housed and fed, and, however heinous the crime, it should never be forgotten that the malefactor has a stomach, and that the gastric juice is an unpleasant secretion, unless it has somewhat to act upon. If the man recovers (and I saw him doing well on Saturday), the operation for castration is a mightily simple one. Yours, very faithfully,

Twickenham, April 27, 1836.

THOMAS LITCHFIELD.

CASE X. *Attempts at self-castration.* *Lancet*, 1838, vol. xxxv.

A boy in Edinburgh, who wished to lead a "holy life," wrote Mr. Liston a letter, of which the following is a literal copy, on the subject of his castration :—

"Dear sir, i am a boy about 14 years of age and wishing for to Lead a holy life intends to be made an eunuch i to wish take the opportunity to let you know that i tried to cut myself and has made a hole about half an inch long and as i think it would be too serrious a gob for me to go any further i wish to know if you would undertake to Do the gob with as little pain as possible and then sow it up and give the Directions how to do until the place be whole so if you be so kind as to favor me thus far in Doing so i will be sincerely oblige to you since i have begun i would wish for to end it J. M."

The next morning the writer of the letter called on Mr. Liston, when it was found that he had made an attempt to perform castration by cutting the scrotum with a putty-knife. Mr. Liston, seeing that the boy was absolutely laboring under monomania on the subject, recommended him to wait some time before he had the operation performed, for, as he was still growing, the testicles might be reproduced. He agreed to wait, but being still anxious

to have his wish carried into execution, he shortly afterwards again addressed Mr. Liston in the following manner.

"Dear Sir, as i am intending to have it Done what i was speaking to you Before and i will run the risk of them growing in again Because if i let it be over for 2 or 3 years more it will quite go out of my head & perhaps not have the opportunity of Doing it the place is quite whole and i would Be very much oblige to you if you would appoint a Day for to Do it providing that there is no danger of losing my life. J. M."

He had another interview with Mr. Liston, and again was he put off, on the plea of his age. About a fortnight after this last interview he called at Mr. Liston's house one evening, having attempted the operation with a pen-knife. One of the testicles was completely exposed, and merely hanging by the cord; he said "he did not like to cut the string." The wound was dressed by Mr. Liston's assistant. Mr. Liston handed him over to the priest to be admonished on the wickedness of plucking out an organ which had not injured him. The lad did not again apply to Mr. Liston.

CASE XI. *Voluntary mutilation, amputating penis, testes, and scrotum.*
Lancet, 1848.

A healthy, fine-looking man, aged thirty-seven, a native of Newcastle, was admitted into the Infirmary, Jan. 1, 1848, at 4, P. M., under the care of Mr. Greenhow, senior surgeon. Has been for nearly a fortnight laboring under delirium tremens. This morning, under the influence of some powerful delusion, he, with a razor, amputated the penis, testes, and scrotum, close to the body, so that not a vestige of them was left. After losing much blood, he was seen by a surgeon, who tied some bleeding vessels, applied cold water, and recommended his being removed to the Infirmary. On examination, a wound of the size of the palm of the hand, was seen just below the symphysis pubis. Some arteries were bleeding, three of which being tied, the hemorrhage entirely ceased. The skin was cold, and the pulse weak. The wound was dressed with cold water. He was incessantly talking nonsense. Ordered, two grains of opium every two hours, until sleep is produced, and to take frequent draughts of brandy and water. Cold cloths to be applied constantly to the part.

2d. Slept well after taking thirteen grains of solid opium. Is now quite sensible, and very quiet. No pain, or return of bleeding; bowels not open; skin hot; pulse quick. To take two grains of opium, with a glass of warm brandy and water at bedtime. Continue cold cloths to the part.

3d. Slept tolerably well. No pain; tongue clean and moist; pulse distinct, but small; appetite good; passes urine without difficulty, and the wound looks healthy. To have meat and beer at dinner. The wound to be dressed with the chalk ointment. Repeat opium pills at bedtime.

4th. Has lost a small quantity of blood from some arterial branch through the night. The bleeding has now ceased. Slept well; no pain; pulse quiet. Apply a lotion of alum. Repeat opium at bedtime.

5th. No more bleeding; wound looks healthy; slept badly last night; bowels open. To take a grain of muriate of morphia, in solution at bedtime. Continue the alum lotion.

6th. The bleeding suddenly returned this morning, so that in a short time he lost much blood. A small vessel was tied, and the hemorrhage ceased. Slept badly last night; bowels regular. To take two grains of morphia every night at bedtime. Continue the alum lotion.

10th. No more bleeding; has good nights; ulcer healing gradually, and

looking quite healthy; new skin has formed around the orifice of the urethra. Continue morphia and lotion.

20th. Health good; sleeps well; bowels open. To use cold water to the wound, which is closing gradually.

30th. Wound healing favorably; passes urine without difficulty. Walks out a little.

After this time he continued to do well; the wound gradually healed, leaving a small flat cicatrix; but he required an elastic bougie to be passed from time to time, to prevent contraction, and he left the hospital on March 8, 1848, much stouter, and in better health than he had been for some years. His spirits were cheerful, and no alteration in voice or appearance had taken place.

CASE XII. *A youth of sixteen castrating himself.* Curling on the Testis.

A lad aged sixteen was brought to the London Hospital in June, 1832, exhausted and faint with bleeding going on from two wounds in the front of the scrotum; they were each about an inch in length, and situated at the sides of the raphé. Upon examination it was found that the scrotum did not contain the testes. The boy subsequently gave the following account of his case. He stated that for about a week he had suffered from low spirits. Early in the morning he suddenly resolved to do himself some injury: his first determination was to cut his throat, but he afterwards resolved to perform the following act of mutilation. Having left his home in the Whitechapel road for some fields in the neighborhood, he first passed a piece of string tightly around the root of the scrotum; he then made an incision to the extent of an inch on one side with a common penknife, and having squeezed the testicle through it divided the cord and removed the gland; he then proceeded to excise the other testicle in the same way. The loss of blood was considerable, and he endeavored to restrain it by drawing the ligature tighter. He said he was not conscious of any pain in the operation; and though he could not assign any reason for selecting this mode of mutilation, he admitted that he had read in an encyclopædia an account of castration. The testes were found in the field where the act was committed. The cord was divided close to the testis on one side, and at about an inch from it on the other. Ligatures were placed upon the spermatic arteries, and in three weeks the wounds had completely healed. No symptoms of insanity were evinced whilst the boy remained in the hospital; he enjoyed good health and spirits, and he talked and joked concerning his situation, without appearing at all to feel his loss.

CASE XIII. *Excision of the whole of the genital organs.* By E. W. H. Beck, M. D., Asst. Surg., U. S. Army. American Journal Med. Sciences, 1847.

J. B., ætat. 31, stout build, bilious temperament, had been a member of the army, but now in the position of barkeeper in a grocery; on the evening of March 9, during a fit of delirium tremens, and unmanageable behavior, was confined in the guard-house. A few minutes after his confinement he borrowed of a fellow prisoner a short, thick, one-bladed pocket knife, with which he completely excised the whole of the genital apparatus, close to the body. Flinging them violently into one corner of the room, he very heroically remarked: "Any d—d fool can cut his throat, but it takes a soldier to cut his privates off." This was at seven and a half o'clock. His companion gave the alarm, and the surgeon of the Mississippi regiment happening to be in the same building, got to him about ten minutes after the accident. Every effort was made to secure the spermatic arteries, but their immediate retraction was

so great that he failed in getting them. I was sent for in consultation, but being absent from my room at the time, the courier returned to the doctor stating the fact. The man was bleeding to death, and, in the desperation of the moment, he determined to apply the actual cautery to the bleeding surface.

At eight o'clock, a few minutes after its application, I saw him, and as the bleeding had almost entirely ceased, a large bunch of rags was applied as a compress, and secured by the appropriate bandages; his hips a little elevated; cold applications to the abdomen, and perfect rest and quiet for three hours; at which time he was removed to the General Hospital, and placed in the surgical ward under my care. The amount of blood lost was estimated by all present at near or quite one gallon. One fact worthy of notice here is, that eight or ten minutes after the bleeding commenced, complete consciousness was restored, nor did he exhibit a symptom of delirium tremens afterwards. On my visit next morning, he lamented his condition as a sensible man; asked my opinion of his danger; complained of no pain; skin cool; pulse slightly jerking, and tremulous; 88 in frequency. I ordered him barley water, and, fearful of hemorrhage, did not disturb the bandages until a disposition to pass water, which was early the following morning. To remove the dressing the more easily, a soft poultice was applied; and after some difficulty in finding the urethra and passing the catheter, evacuated the bladder, with but a little oozing of blood from the surface and one minute artery, which I secured by torsion. Ever after this, his water passed without artificial assistance; his pulse became equal and soft after a gentle aperient, and absolute diet. Dry dressings, until a yellowish sloughy secretion was coming off, when I washed with a solution of chlorinated soda, and applied simple cerate. The too luxuriant granulations, which soon arose, were suppressed with caustic, and the whole had kindly cicatrized in five weeks from the occurrence of the accident.

For the last few days of the healing process, a large silver catheter, and afterwards, an oiled tent, was retained in the urethra, to prevent any contraction, to which there was a great tendency, and around which the orifice closed with a firm callous edge. The superior surface, or that above the urethra, presents a flat, or rather concave appearance, the posterior slightly elevated or ridge like.

CASE XIV. *Excision of the genitals followed by consumption* By Wm. T. Taylor, M. D., Philadelphia, Pennsylvania. *American Journal Med. Sciences*, 1855.

Charles H., a cigar-maker, residing in this city, was in the habit occasionally of drinking to excess. He was a married man, and the father of three children. In the early part of the year 1853, he had been on a debauch for several weeks, when he was attacked with mania à potû. Being unable to sleep, and having his mind constantly disturbed with hallucinations, he applied to me on March 6 for relief, when I gave him a tablespoonful every two hours of the following mixture: Morph. sulphas., gr. i; spt. ammon. aromat., fʒi; spts. æth. comp., fʒij; liq. ammo. acet., fʒij; aq. camph., fʒi. This composed him, so that he was enabled to sleep, which he had not done for several days.

March 7. He was quite delirious, requiring to be watched incessantly by his family. By using the mixture, he was quieted during part of the night; but, at 4 o'clock on the morning of March 8, he escaped from home, and in the darkness having eluded his pursuing relatives, wandered out in a wood near to Girard College. There he picked up a piece of a porter bottle, with

which he made a deep cut in the bend of his left arm, and also hacked off his penis and testicles, with the scrotum, at the pubes.

When discovered, he was sitting on the ground bleeding very profusely, and actually gnawing at his lacerated and bloody organs. He was brought home at half-past 8 o'clock A. M., when I saw him; and, there being no hemorrhage from either of his wounds, whilst his powers of life were failing very fast, a glass of brandy was given to him, and he was sent to the Pennsylvania Hospital. Being an injury which resulted from mania à potu, he was not admitted, but sent from thence to the Alunshouse Hospital, where he came under the care of Drs. Stillé and Gilbert, assistant-surgeons of the institution. One of the spermatic cords was tied, but the other, having retracted into the abdomen, could not be found; a T bandage was applied, and a catheter introduced through the remaining part of the urethra. Reaction occurred in the afternoon, but there was no return of hemorrhage.

15th. On visiting the hospital to-day, I found the patient quite rational; he conversed very freely on his condition. Having slept eight hours during the previous night, felt better than he had since he entered the institution. The wound has a healthy appearance, but he complains of a stinging pain in the urethra; passes his urine in a full stream. Dr. Stillé informed me that, during the past week, in consequence of being visited too frequently by his relatives, he had had attacks of delirium, and required occasional doses of morphia, with watchers constantly at his bedside, to prevent his committing suicide or some violence on himself. The late Dr. Stewart (then house-surgeon) informed me that the patient gave him the following account of his strange act:—

Imagining that his relatives were accomplices of a crowd of demons who were constantly pursuing him, he succeeded in escaping from them in the darkness of the night, and ran towards Girard College, intending to hide in a small wood near by. But, on approaching the place, he was met by a greater number of fiends, who, having caught and secured him, told him that, to appease their anger and obtain his liberty, he must sacrifice his virility. Accordingly, he picked up a piece of a porter bottle which was lying on the ground near by, and performed the operation as before mentioned. Having so rude an instrument, he was three-quarters of an hour in excising the parts, whilst the lacerating manner of operating prevented much hemorrhage.

April 20. Through the care and attention of his physicians and nurses, he was enabled to leave the hospital to-day, and return to his home. The wound at the pubes had nearly healed, with the exception of a few unhealthy granulations, which were kept down by the use of nitrate of silver and a wash composed of the sulphate of copper and quinia.

July 21. I was requested to visit C. H., who, from exposure yesterday, had taken a heavy chill, and was then suffering with a high fever, and a spasmodic stricture of the urethra; this, however, was only partial, for the urine flows in a very small stream from a meatus urinarius so contracted and hidden by the cicatrix on the pubes that it could scarcely be seen. With some difficulty, I introduced a probe, of the size of a knitting-needle, through the orifice; to allay fever and dilate the passage, I fomented the pubes with warm water, and gave an infusion of senna and salts, with occasional doses of neutral mixture. These greatly relieved him; so that, on the following day, I left with him a small German-silver bougie, to use daily in dilating the orifice as I had previously done. Finding the use of this bougie to produce some spasmodic contraction of the urethra, it was changed for a silver one, which caused no uneasiness. By its use, and one or two of larger size, the passage became dilated to its usual dimensions.

January, 1854. Met C. H.; he is very much improved in his appearance, being quite robust. His beard and whiskers are very thick. His voice is still masculine, but there is a slight hesitation or faltering in his speech, which I did not observe before the accident. This hale and hearty condition of his physical frame did not last long; for, during the month of August he began to lose flesh, and was affected with night-sweats, together with great prostration, for which he took tonics. Obtaining no relief, and being also affected with a troublesome cough, he applied to me on the fourth of November last. He was pale and greatly emaciated, had a hectic fever, a quick and feeble pulse, a dry cough, night-sweats, loss of appetite, with general debility. Gave him a tablespoonful of the cod-liver oil three times a day, with an anodyne expectorant for his cough; but, being unable to give him any encouragement or hopes of a cure, he left me, nor did I see him again, but ascertained from some of his family that an "Indian Doctor" had undertaken to cure him. This empiric, however, could not keep away the great destroyer; for, in the latter part of December, 1854, he fell a victim to phthisis pulmonalis. Can the loss of his virility have had any connection with the development of tubercular disease?

CASE XV. *Cutting off the privates in an adult.*

In 1835 Dr. McPherson, of Marietta, Pennsylvania, published in the *North American Archives of Med. and Surg. Science*, Baltimore, the case of an Irishman, who, in a fit of delirium, with a small-bladed dull penknife, cut off his penis and extirpated both testicles. The hemorrhage was arrested by astringents and cold cloths, and the patient then secured in bed. After sleeping several hours he awoke quite rational, and subsequently recovered so completely as to be drunk almost every day afterwards for some time.

SECTION VIII.

REUNION OF SEPARATED PARTS.

CASE I. *Reunion of an arm almost completely separated by a sabre cut.* By M. Stevenson. *Gazette Médicale de Paris*—*Southern Med. and Surg. Journal*, 1837.

An Arab, Abdoo Braheem, received a violent sabre cut in the arm, immediately below the external margin of the deltoid muscle, dividing obliquely all the tissues, the humerus and the entire body of the biceps muscle. The blood was projected forcibly to the distance of several feet. The assistants arrested the hemorrhage by exerting compression on the wound by means of a turban. Upon examination, M. Stevenson ascertained that the arm was attached to the body only by a single strip of skin at the internal part; the brachial artery had been divided at the same time with the biceps muscle; the pulse at the wrist had disappeared entirely. His first idea was to complete the amputation; but this was opposed by the patient, and it became necessary to attempt the reunion, although but small probability of success existed. Assisted by M. Stevenson, M. Pearson first desired to ascertain if the brachial artery could be tied; this attempt was useless. A tourniquet was applied, left loose above the wound, and confided to an assistant with the injunction to tighten it if the hemorrhage reappeared. The wound was cleansed, the parts brought in apposition, and an appropriate apparatus, with splints applied.

No hemorrhage—the pulsation at the first imperceptible until the third day. At this period the pulse began to reappear very slightly, and became more and

more sensible. The wound was perfectly cicatrized on the 26th day, but the fracture had not yet united. The arm was kept in the apparatus until the 45th day; then the cure had been completed. The extremity, however, remained paralyzed.

This case is worthy of interest; it leads to practical consequences of the highest importance. The reunion of a voluminous limb, like the arm, may then take place after the division of its principal arteries and nerves. The contrary, however, has been laid down as a principle *a priori*. Dupuytren had declared (*v. plaies d'armes de guerre*), that in members whose vitality is confided to an unique source (artery and nerve), as in the arm and thigh for example, the reunion was impossible when this source was concerned in the injury. Besides, added he, what would become of the divided artery without a ligature? Thus he thought that the completion of the amputation was indispensable in this case. Reunion had, it is true, been attempted and obtained in an analogous case by Lamartiniere, but the brachial artery and plexus had not been injured, which changes entirely the conditions of the lesion. The fact in question then proves the contrary of what had been presumed: reunion of the large members may take place notwithstanding the division of the principal vessels. The circulation may be re-established as after the operation for aneurism. Besides, we can easily conceive how a large artery may be entirely obliterated.

There must be some exaggeration about the extent of the wound in this case. We do not believe the particulars as here reported. But after all, of what use was this arm, even granting full credit to the facts as recorded?

CASE II. *Reunion of a finger completely separated, followed by fatal tetanus.* By James Deane, M. D., of Greenfield, Massachusetts. Boston Med. and Surg. Journal, 1853.

A young man accidentally divided the forefinger obliquely through the third phalanx. The cut was smooth, and the day being cold there was little bleeding, although the patient walked half a mile. I regretted that he had not brought the separated fragment, whereupon he produced it from his pocket. It had been struck off full thirty minutes, and was cold and bloodless. I immediately adjusted the incised surfaces and applied the necessary dressings. On the fifth day, union by first intention was established, although subsequently the nail separated.

The sequel of this injury was deplorable. The young man returned to his occupation at the expiration of three weeks, and soon after, as he supposed, took cold in the throat, which pretty nearly prevented motion of the lower jaw. He, however, paid no attention to it for several days, until he became much worse, and then I was called to see him, and found him laboring under a seizure of tetanus. He was in great pain in the epigastric region, with violent spasms in the back and neck, and his face presented the expression peculiar to the sustained contraction of its muscles, the sardonic laugh. His mind was anxious but depressed, his respiration at times painful and difficult, and the circulation feeble, rapid, and tremulous. In spite of all remedial measures, the spasms became more general and severe, and his sufferings were very great until the seventh day from the attack, when, in the act of swallowing, he was seized with violent spasms in the throat and suddenly expired.

CASE III. *Reunion of two fingers completely separated.* By James Deane, M. D., of Greenfield, Massachusetts. Boston Med. and Surg. Journal, 1853.

In another instance, a young man struck off two of his fingers by a straw cutter, and I was sent for to dress the wounds. I inquired for the amputated

fragments, and found that they had received no attention whatever; but search was made, and they were soon produced. The direction of the incisions was obliquely through the third phalanges. The truncated portions were immersed in warm water and accurately applied, and upon the subsequent dressing it was found that union had taken place in one by the first intention, and in the other the integuments were gangrenous.

In this case the period of separation was at least thirty minutes; but the chance of success will be in proportion to the speedy adaptation of the incised surfaces.

CASE IV. *Reunion of a portion of the thumb completely separated for more than a half hour.* Lancet, 1843, vol. xxvi.

It is related by M. Beau, *interne* at the Salpêtrière, Paris, in the *Archives Générales* for March :—

On the 7th of September, 1833, at a quarter after six in the morning, Marianne Daune, aged 41 years, housemaid at Salpêtrière, a girl of good strong constitution, and very sanguine temperament, while cutting bread for the patients, accidentally wounded the thumb of the left hand. The force of the cut was sufficient to divide it completely, and its extremity was projected several inches from the body, on the table. Another woman, who happened to be present, took up the divided morsel, and wrapped it in a piece of paper to keep for the *interne*, who did not arrive until half an hour afterwards.

On examination, M. Beau found a clean wound, embracing the whole thickness of the thumb, passing obliquely from the dorsal to the palmar surface, and commencing a little below the middle part of the nail, which had been divided in a line parallel to its upper edge. At each pulsation of the heart a small jet of blood was discharged, to arrest which the hand was plunged in cold water. The separated end of the thumb was pale and cold, one-fourth of an inch long on the dorsal surface, and three lines and a half on the opposite side. The divided edge was clearly cut, but covered by dust. M. Beau having conceived the idea of attempting reunion, moistened the morsel of flesh in warm water, removed the dust as carefully as possible, and having cleared the wound with a sponge, he placed the divided surfaces in perfect apposition; the parts were kept in contact by five slips of diachylon plaster, some lint, and compresses. During the whole of the 7th, there was severe pulsating pain in the thumb, extending up to the shoulder, and preventing the patient from sleeping.

8th. Fever and thirst.

9th. Less fever.

10th. No pain; rested well all night.

On the 15th the dressings were removed; the lint was dry, and it was found that the end of the finger was united slightly at the palmar surface to the thumb. On the dorsal surface the parts were still capable of some separation; the nail and epidermis were black; no trace of suppuration. The finger was now plunged for two or three minutes in warm wine, and dressed in the same manner as before.

18th. No bad odor or suppuration; the adhesions formed are stronger there is a little dark serous fluid interposed between the edges of the nail.

20th. The nail and epidermis were removed by exercising gentle traction. The finger now presented the following appearance: The summit of the phalanx, dorsal surface, is not united to the rest of the bone; it is necrosed, dark, and movable, being merely retained *in situ* by the soft parts, which are in a state of gangrene. A gray adhesive eschar forms round, and below it a horse-shoe line, very narrow. The corresponding surface of the phalanx is exposed,

and does not present any appearance of vascular granulations; but on the lateral and dorsal surfaces the skin of the divided morsel is continuous at all points with the rest of skin; the bond of union is traced by a semicircular line, not well marked, though prominent. Here the skin is red and smooth, forming a crescent two lines and a half broad in the middle, and gradually diminishing on either side within half a line of the nail.

21st. Suppuration has commenced; the portion of necrosed bone was removed.

22d. The eschar on the dorsal surface has come away. We established the existence of sensibility in the extremity of the united finger, by touching the palmar surface with the barb of a pen; even when the head was turned aside, the patient could tell whenever the feather was placed in contact with the skin.

27th. The cicatrization of the wound is complete.

CASE V. *Reunion of the extremity of a finger, which was completely cut off.* By Dr. Angelo. *Lancet*, 1834, vol. xxvi.

On the first of January, 1818, a day during which the cold was more intense than I ever felt it in our district (at Chiavari), Emmanuel Copello cut off at one blow, with a very sharp knife, the extremity of the index finger of the left hand. The division took place transversely below the root of the nail. The child immediately took up this portion of the phalanx which fell on the ground, reapplied it to the wounded finger, and hastened off to the shop of M. Podeste, an apothecary, about fifty paces distant from the place where the accident had just occurred, for the purpose of having it dressed. There he took off the detached portion of the finger to show the cut, and reapplied it immediately. At the end of about fifteen minutes I came to the shop. I examined the finger carefully, and observing that the child had not replaced the extremity of the phalanx so as to correspond exactly with the finger, I wished to remove it a third time: but whether the coagulable lymph made it already adhere, or, what is not very probable, whether this adhesion was the effect of coagulation of the blood, I found the approximation so solid that I did not think it right again to detach the extremity of the finger by applying force: I dressed it, however, the best way I could, and, finally, kept it in its place by means of two strips of diachylon, which I secured by two circular turns made with a third strip. The finger was covered with some linen soaked in balsam of Peru, and the whole enveloped in an appropriate bandage. I recommended the patient to keep his arm in a sling, and carefully to avoid striking his hand against anything. On the fifth day I removed the dressing, and I saw that the skin of the extremity was livid. I now thought that mortification was proceeding, when, on raising the epidermis thus changed, I perceived beneath it the cutis red, and completely reunited. I encompassed the finger with lint, still leaving on the two strips, which crossed each other at the extremity of the finger. Three days after, I removed the dressing entirely, and was satisfied that the reunion was complete. The mortified skin came off like the extremity of the finger of a glove; beneath the divided part of the root of the nail we already saw the rudiments of a new nail. The sensibility of the extremity of this finger remained for a considerable time more obtuse than that of the other fingers, and its point was not as thin as before. In the point corresponding circularly to the division, the cicatrix left around the finger a depressed line, similar to that which would exist if the end of the finger had been for a long time compressed in the narrow neck of a bottle.

CASE VI. *Reunion of parts after long separation from the body.* By Miles Marley, Esq., F.L.S. *Lancet*, 1834, vol. xxvi.

A boy, about eleven years of age, had one-half of the first phalanx of the index finger of the left hand severed by a flag-stone. Half an hour elapsed before the separated part was reapplied. I employed the usual means—strips of adhesive plaster; union took place rapidly. The nail came away, which was succeeded by a new one, and there was a perfect sense of touch in the part.

In M. Beau's case, there was likewise the usual nervous sensibility after union had taken place.

The other case recorded by you as related by Dr. Angelo, in the *Annal. Univ. de Méd.* for September last, I consider of equal interest. It is somewhat remarkable that his case so nearly resembles mine, the subject of it being a boy, who had injured the index finger of his left hand, and I may add that the progress of the case in every respect was similar.

CASE VII. *Separation and reunion of the thumb.* By W. B. Lynn, of Westminster Hospital. *Lancet*, 1837, vol. xxxiii.

James Hardy, a respectable mechanic, *ætat.* 59, was admitted October 13. While engaged in directing the operation of the saw-mills in York-road, Lambeth, a heavy plank was whirled by one of the spindles edgewise against the beam, catching his thumb between them, and severing it a little above the first joint, leaving only a small portion of integument, which prevented it dropping from the hand. The bone was very irregularly broken. He walked to the hospital, carrying the thumb in the palm of the hand, the divided surfaces exposed. My first impression was that nothing remained to be done but to snip across the small portion of skin, remove the splintered bones, and make a clean stump of it; but having often witnessed extraordinary adhesions of parts almost entirely separated from the body, I determined, much as the chances of success were against me, upon giving it a trial. Had the wound been inflicted by a *sharp* instrument, from the small isthmus that joined the parts, much doubt might have been reasonably entertained of a reunion; but in this case the chances of success were greatly lessened by the very contused and lacerated nature of the wound; a possibility, too, existed of the patient's being seized with tetanus: as that, however, would not, I considered, have been prevented by amputation, I had only to act on the probabilities of saving the limb, which would be soon decided; for, if upon the following day, it should be found to have lost its vitality (the patient having lost nothing by the delay), the only course would be that which I believe very many would have adopted in the first instance, *viz.*, amputation. Having decided upon the opposite course, I replaced the divided member, taking care to place the fractured ends of the bone in perfect apposition, which operation was much facilitated by the irregularity of the fracture, the serrated ends of the bone bearing the appearance of what the mechanic would term dovetail; I next brought the teguments together carefully, keeping the several divided tendons in strict apposition with their fellows; I then secured the whole with sticking-plaster, making several doubles answer the purpose of a splint. The patient was put to bed, and the following lotion applied: *R.* Solution of acetate of ammonia ℥ij ; alcohol ℥i ; water ℥iv . Make a lotion.

This was ordered to be used a little warmed, there being no room left for the slightest impediment to the small share of vascularity left to renew and support vitality through the thumb. An aperient and saline, with opium, was directed to be given; visited him again (his admission being at noon), at nine in the evening. I found the thumb bearing every appearance of vitality;

he had some pain, but it was alleviated by the opiate; as there was some appearance of tension about the wrist, I exchanged the lotion for fomentations, ordered a continuance of the saline, with opium, and left him for the night. On visiting him in the morning I was pleased to find that all was going on well; he had suffered considerable pain, in which the thumb bore its share, and the inflammation had reached nearly as high as the elbow. The principal indication now was the reduction of the inflammatory state of the surrounding parts, with which view I gave the following cathartic: R. Calomel gr. ij; jalap gr. viij; honey, sufficient for two pills; to be taken immediately. With R. Sulph. magnes. ℥ij; infus. sennæ ℥ij; tinct. sennæ ℥ij. To be taken two hours after.

The fomentation to be kept up as high as the elbow. On visiting him at 9 P. M., the cathartic had operated copiously; he was free from pain, and the swelling and inflammation were greatly reduced, nor were there any less favorable appearances about the thumb. As the cathartic had produced some exhaustion, I gave him a draught, with aromatic confection, and ten minims of liq. opii sed.

On visiting him next day, inflammation had almost wholly subsided. I omitted all medicines, and, as he complained of hunger, allowed him some beef tea and toasted bread.

From this time everything went on well. I did not remove any of the dressings till about the sixth day, when some of the outermost strips were taken away, the rest cleansed, and the discharge pressed out. As he complained much of the offensive smell, the chloride of lime in solution was used. By degrees the whole of the first dressing was removed, and at about the end of the fourth week I could take the whole dressing away together, leaving the satisfactory sight of the thumb *in statu quo*, and but little altered in appearance.

It is now full seven weeks since the accident occurred; the bones are perfectly united, and he has confidence enough to attempt some motion, but from long confinement the hand itself has but little capability of motion. That, we are sure, will recover itself, but what share the thumb will partake remains to be seen. I expect it will be a very useful member.

CASE VIII. *Reunion of portions of the forefinger and thumb after their total separation.* By J. Denny, Esq., of Stoke Newington. *Lancet*, 1849.

A laboring man applied to me to dress the thumb and forefinger of the left hand, having, as he stated, met with an accident whilst cutting or chopping a handful of grass with a sickle. Upon examination I found he had, by a clean incision, cut out of the thumb a triangular-shaped piece, the incision extending from the end down the centre of the nail, nearly to the root, then outwards towards the forefinger. The piece thus disunited consisted of the portion of nail described, integument, muscle, and a minute portion of bone. From the finger he had merely sliced off a piece of integument and muscle on the side next to the thumb. I sent him back the distance of two miles, to search amongst the grass for the dismembered portions, which he succeeded in finding, and which, upon his return, I carefully washed with warm water, and adjusted in exact apposition to the surfaces from whence they were cut. I freely applied collodion, so as effectually to exclude the atmosphere, and prevent any further hemorrhage; and with narrow pieces of strapping held them firmly in the position in which I had placed them. The result has been the perfect reunion of both pieces, leaving little or no cicatrix.

I should mention that the period that elapsed from the occurrence of the accident to the replacing of the parts was four hours; also that the pain,

which was very acute, from the exposure of the cut surfaces to the atmosphere, ceased immediately when the parts were replaced; and the man experienced little or no pain afterwards.

CASE IX. *Adhesion of a portion of the thumb altogether separated.* Philadelphia Journal of Med. and Phys. Sciences, 1826, vol. xii.

On January 30th, 1826, Mrs. B—— called upon me with her son, requesting that I would dress his thumb, which had been severely wounded with a penknife. On examination, I found that a piece was severed from the end of the thumb, with a portion of the nail; and as it was left at home, I begged the lady would go back and try to find it, which she succeeded in doing. I immediately adapted it to the place from which it had been removed, and confined it *in situ* by means of strips of lint, imbued with tinct. benz. comp., there being too much hemorrhage to allow of the adhesive plaster being neatly applied. A complete union by the first intention took place. The portion of the thumb was separated for at least ten minutes.

CASE X. *Reunion of completely separated portions of fingers.* By Signor Della Fanteria. British and Foreign Med.-Chir. Review, 1842.

A girl, fourteen years old, was engaged with another person in some domestic occupation, when the latter accidentally let fall a knife, which cut off two of her fingers below the first phalanx. The author being soon after summoned, found the two pieces in some meal on which the patient's hand was resting at the time of the accident; but he discovered, to his great surprise, that each of them was divided into two portions. However, he determined to try to unite them, and having put the bits together, he kept them all in their places with sutures and strips of plaster. In a few days the adhesion was completed, and the patient ultimately recovered the entire use of her fingers.

It is necessary to mention that the authenticity of this strange case was confirmed by Professors Centofanti and Vacca.

If each piece of the fingers was divided into two portions *transversely*, we cannot conceive how it was possible for union to take place. We are sceptical in regard to this case.

CASE XI. *Union of a part of a finger completely separated.* By Henry Hartshorne, M. D., of Philadelphia, Pennsylvania. American Journal Med. Sciences, 1850.

To add to the well-attested cases in which completely excised parts have reunited with the body, I find, on my notes, that a colored man, who had cut off the whole pulp of the end of one forefinger with a razor, placed it on again, and came to the hospital. Finding the piece crooked, I pushed it, so that it fell off into a basin of water. It was refitted, however, and left untouched for five days. It was then found to be entirely reunited, leaving a mere line to indicate the junction.

CASE XII. *Reunion of a portion of the brain and skull completely separated.* By W. Mortimer Brown, M. D.

This most remarkable case we find in the *New Jersey Medical Reporter* for 1852. It, in itself, is sufficient to settle the question forever of reunion, not only of separated soft, but of hard parts—even of the osseous structure.

The cases, published in your last number, of injuries of the head, with loss of a portion of the brain, have brought to my mind a case which I attended some years since, which may be deserving of record, as a case of recovery

after a portion of the brain had been severed from the cerebral mass, replaced, and apparently reunited. The wound was made by a sharp axe, which, in the hands of a strong and angry man, was driven with such force as to make a section of the skull, cutting off a portion of the brain, which remained in its situation in the severed portion of the skull, hanging down on the shoulder, attached by a strip of integuments to the neck. The part cut off was the posterior part of the parietal bone, and the orifice through the inner table of the skull was about an inch and a half, and the portion of brain excised over an inch, in diameter.

The man was able, after the injury, to walk some rods, with assistance, and talked in a rational manner by the way. Securing the occipital artery, which had been divided, removing some small fragments of bone, shaving around and thoroughly cleansing the wound, *I restored the flap of integuments, with the portion of skull and brain*, to its proper position, and secured them by stitches, adhesive plaster, and a roller. The head was kept elevated and cool, a light diet enjoined, and a solution of sulphate of magnesia, and tartrate of antimony and potassa, given to move the bowels, reduce the circulation, and restrain the appetite.

The mental faculties remained unimpaired, except for a short time on the second day; the wound healed rapidly, being entirely closed in a week, no unpleasant symptoms afterwards occurred, and on a subsequent examination the severed portion appeared to be firmly united to the cranium, no motion being perceptible on firm pressure, and no inconvenience being felt when galloping on horseback.

There was no evidence in the dressings of the discharge of any portion of the brain, and, in all probability, the severed portions reunited without loss of substance.

The case was watched with some interest to mark the development of any peculiar mental phenomena, but nothing occurred worthy of note, though, at the time of the examination of the wound, pressure was made upon the exposed portion of brain.

A brief history of the formation of artificial noses. Lancet, 1826, vol. i.

The first surgeon who practised a method of supplying the deficiencies of noses, ears, lips, etc., was one Branca, a Sicilian, who flourished in the middle of the fifteenth century. Nosorenius places Branca at Catania, and calls him "a celebrated surgeon, who restored ears, lips, and noses." Elysius Calentius, a Neapolitan poet of that time, writing to one Orsianus, who had lost his nose, strongly recommends him to come to Branca, "a man of great abilities, who had learned the art of restoring a nose, either by supplying it from the arm of the patient, or by infixing upon the part the nose of a slave." He assures his friend that he had himself witnessed the operation, and that if he would only come to Naples, and submit to it, he might go home again with as much nose as he pleased.

Vincent Boiani, Bernard his nephew, and some of his descendants, were distinguished at Calabria during the sixteenth century, in the art of supplying defective lips and noses.

Alexander Benedictus, a Veronese, who taught medicine at Padua, some time before the year 1495, is the first medical writer extant who, since the revival of letters, has mentioned this operation of surgery. He states, that in his time new noses were formed with admirable art in the following manner: The operator dissected the upper skin of the arm with a razor, and then paring off the remaining edges of the nostrils, or if neces-

sary, cutting them away, he bound the arm to the head, in order that wound might adhere to wound. After this, the wounds having conglutinated, he took from the arm, with the knife, as much as was wanted for the restoration of the nose, which was accomplished; for the kindred vessels of the nose nourish the flesh which is newly acquired. He adds, however, that these artificial noses badly endured a severe winter; and he recommends his patients to use them gently, lest they be torn from the trunk.

Gabriel Fallopio, who died at Padua, in the year 1563, in his tract *De Decoratione*, alludes to this method of restoring noses.

Ambrose Paré, whose work was printed in 1561, remarks, that there lived in Italy, some years before, a surgeon who restored lost portions of the nose, by excavating a part of the biceps muscle, of the size required for restoring the nose to its former bulk; inserting the part excavated into the vacancy of the nose, and binding the head and arm together in such a manner that neither of them could possibly move. In forty days the flesh of the arm was agglutinated to that of the nose. The younger son of a noble family in Italy, being weary and ashamed of a silver nose, applied to this surgeon, from whom he returned with a nose of flesh, to the surprise and satisfaction of all who knew him.

Andrew Vésale, a native of Brussels, in his *Chirurgia Magna*, printed at Venice in 1569, treats, at some length, of the restoration of the nose, by supplying the deficient parts from the arm.

Stephen Gourmelen, in his *Ars Chirurgia*, printed in 1580, repeats the assertion of Calertius, that the nose might be formed or refitted either from the arm of the patient or from the nose of a slave.

Gaspar Taliacozzo, commonly called Taliacotius, a writer whose celebrity on the subject of the nasal operation has eclipsed all who preceded him, was born at Bologna in the year 1546, and died in the same city in 1599. At his death the magistracy of Bologna honored his memory with a statue, which they placed in the anatomical theatre of the University, and which had in its hand *a nose*, as an emblem of the art which he practised with so much fame and success. In the year 1597, he published at Venice his work *De Curtorum Chirurgia per Insitionem*. This scarce and singular work is divided into two books, in the first ten chapters of which the author brings all his learning to bear upon the subject of operations for new noses, etc., in illustration of which he has not only quoted medical writers, but has levied contributions on the poets, the fathers, and even the Scriptures; so that we have a motley collection of references to Homer, St. Augustine, Euripides, Horace, Tertullian, St. Gregory, Aristotle, Plutarch, and the book of Genesis. The rest of the work is occupied with minute details of the manner in which he performed the operation for restoring the deficiencies of noses, ears, and lips. His method of restoring the nose was, to dissect a portion of integument, of a square or oblong shape, from the arm of the patient, so that one side of the square or oblong should remain attached to the arm, and the flap, being previously twisted, might be brought in contact with the face. He then proceeded to dissect away the integuments of the edges of the deficient parts. A model of the proposed end of the nose was made of paper; and this, when flattened, served as a pattern for shaping the graft or flap of skin. The graft was then brought to the nose by lifting the arm, to which at one end it still adhered, and being found to fit, was fastened by ligatures. The graft or flap of skin having been thus applied to the defective nose, the patient was bound, so that he could not stir in any direction. At the end of twelve days the patient's arm was released from his

face, the septum was modelled, plasters and bandages applied, and great care was to be taken for some time to defend the new nose from accidental injury.

This is the Taliacotian or Italian method of operating for artificial noses. The works which have been written since this time on the nasal operation, are little more than abridgments of the treatise of Taliacotius. In fact, the art appears to have almost died with him, and neither France nor Germany were ever acquainted with it, but as an art in use among certain practitioners of Italy. The nasal operation was recommended by Dr. Read, in his *Chirurgorum Comes*, printed at London in 1687; and a few years after this, Sir Charles Bernard, subsequently serjeant-surgeon to Queen Anne, in a paper inserted in Wotton's *Reflections on Antient and Modern Learning*, wrote in strong approbation of the art, and wished it to be introduced into English practice. Van Helmont, in his treatise *De Magneticâ Vulnerum Naturali et Legitimâ Curatione*, relates a story of a native of Brussels, who, having lost his nose in battle, repaired to Taliacotius to have it restored. As he dreaded to have the incision made in his own arm, a laboring man was found who, for a remuneration, suffered the nose to be taken from his arm. About thirteen months after his return to Brussels, the adscititious nose suddenly became cold, and after a few days dropped off in a state of putrefaction. The cause of this unexpected occurrence having been investigated, it was discovered, that at the same moment at which the nose grew cold, the laborer at Bologna expired! Dr. Fludd also, in his "Defence of Weapon Salve," says, that a nobleman in Italy, who lost a great portion of his nose in a duel, prevailed on one of his slaves to suffer a piece of the flesh of his arm to be cut out, which was so managed, by a skilful surgeon, as to serve in the place of a natural nose. The slave being rewarded and set free, went to Naples, where he fell sick and died: immediately on which a gangrene appeared on the nobleman's nose.

It is to these superstitious stories, and not to the works of Taliacotius, that Butler refers in a passage in the first canto of *Hudibras*. In the two hundred and sixtieth paper of the *Tatler* will be found a very facetious lucubration on the subject of new noses, founded on the lines of Butler. We at first gave Voltaire credit for the idea of interring the nose in the same coffin with its parent; but he is so confirmed a plagiarist, that it is never safe to ascribe to him the merit of originality, and, accordingly, he appears to have been indebted for this joke to the writer in the *Tatler*.

Among the stories of adhesions of the separated nose, the following, which is related by M. Garengot,* a French surgeon, whose high reputation procured for him a seat in the Royal Society of London in the year 1728, is one of the most marvellous: "In the month of September," says M. Ga-

* Dr. Balfour, of Edinburgh, has published a case of adhesion, almost as extraordinary as that related by M. Garengot. On the 10th of June, 1814, a man came to him with half the index of the left hand wanting. Dr. B. inquired what had become of the amputated part. The man told him that it had been struck off by the stroke of a hatchet, and that he had never looked for it, but he believed it would be found where the accident happened. Dr. B. despatched a man, who accompanied the patient, to search for it. In about five minutes the man returned with the piece of finger, which was white and cold, and looked like a piece of candle. Without the loss of a moment, Dr. B. poured a stream of cold water on both wounded surfaces, to wash away the blood from the one, and any dirt that might adhere to the other, and then applied, with as much accuracy as possible, the wounded surfaces to each other. On the second of July, the reunion of the parts was complete, and Dr. B. remarks that "the finger was, in fact, the handsomest the man had;" an observation which reminds us of the predilection of the wag, who, being condoled with on the loss of his leg, replied, that he was sorry for it too, for it was his *favorite* leg.

rengent, "a soldier of the regiment of Conti coming out of L'Epée Royale, from an inn in the corner of the street Deux Ecus, was attacked by one of his comrades, and in the struggle had his nose bitten off, so as to remove almost all the cartilaginous part. His adversary, perceiving that he had a bit of flesh in his mouth, spat it out into the gutter, and endeavored to crush it by trampling upon it. The soldier, who, on his part, was not less eager, took up the end of his nose, and threw it into the shop of M. Galin, a brother practitioner of mine, while he ran after his adversary. During this time, M. Galin examined the nose which had been thrown into his shop, and as it was covered with dirt, he washed it at the well. The soldier returning to be dressed, M. Galin washed his wound and face, which were covered with blood, with a little warm water, and then put the extremity of the nose into this liquor, to heat it a little. Having in this manner cleansed the wound, M. Galin now put the nose into its natural situation, and retained it there by means of an agglutinating plaster and bandage. Next day the union appeared to have taken place; and on the fourth day I myself dressed him with M. Galin, and saw that the extremity of the nose was perfectly united and cicatrized."

In justice to Taliacotius, it must be observed, that he did not contemplate the adhesion of parts between which total separation had taken place, and that his theory had no connection with the extraordinary and exaggerated accounts of the union of divided parts of the nose.

The nasal operation, however, fell into neglect, at least in the west of Europe, until, at the close of the last century, it was again brought into notice by a periodical publication for the year 1794, which contained an account of the manner in which it was performed by an Indian surgeon at Bombay, on a Mahratta, of the caste of husbandmen, whose nose had been cut off by Tippoo in the war of 1792. The Indian operation, which had been practised from time immemorial by the native practitioners, is performed in the following manner: A thin plate of wax is fitted to the stump of the nose, so as to make a nose of good appearance; it is then flattened, and laid on the forehead. A line is drawn round the wax, which is then of no further use; and the operator then dissects off as much skin as it covered, leaving undivided a small slip between the eyes. This slip preserves the circulation till a union has taken place between the new and old parts. The cicatrix of the stump of the nose is next pared off; and immediately behind this raw part, an incision is made through the skin, which passes round both alæ, and goes along the upper lip. The skin is now brought down from the forehead, and being twisted half round its edge, is inserted into this incision. A little terra japonica is softened with water, and being spread on slips of cloth, five or six of these are placed over each other, to secure the joining. No other dressing than this cement is used for four days; it is then removed, and cloths dipped in *ghee* (a kind of butter) are applied. The connecting slip of skin is divided about the 25th day; when a little more dissecting is necessary to improve the appearance of the new nose. For five or six days after the operation, the patient is made to lie on his back; and on the tenth day bits of soft cloth are put into the nostrils, to keep them sufficiently open. This operation is said to be always successful. The artificial nose is secure and looks nearly as well as the natural one. It can sneeze smartly, distinguish sweet from unsavoury smells, sustain the application of the finger and thumb, and even bear to be well blown, without danger of falling into the handkerchief.

The Indian operation for the artificial nose, which is a great improvement on the Taliacotian method, was that adopted by Mr. Carpue, in the two suc-

cessful cases of which he published an account in the year 1816. The cases, however, on which Mr. Carpue operated for the artificial nose, were more favorable subjects than the one on which Mr. Travers performed the operation at the Borough, on Friday, November 7th. In Mr. Travers's case, caries of the nasal bones had taken place as early as November, 1822.

CASE XIII. *Reunion of the nose after complete separation for hours.* *Lancet*, 1834, vol. xxvii.

The *Ossevatore Medico* contains a curious, and what it affirms to be a well-authenticated, case of reunion of the nose after complete separation.

The patient, a woman of the town, had the whole of the soft part of the nose bitten off, in a quarrel, by a man. She was immediately carried before the commissary of police, when the nose was dressed. Three hours afterwards, Dr. Carlizze, who happened to come in, saw the patient, and entreated that search might be made for the lost nose. This was done, and two and a half hours afterwards the mutilated portion was found, contracted, and all covered with filth. The Dr., however, washed the parts clean, and applied the piece, putting in a few points of suture. The dressings were not removed before the seventh day, when the witnesses observed, with great satisfaction, that complete union had taken place. In thirty-seven days the cicatrix was perfectly consolidated. The aspect of the nose, however, was most disagreeable, from the color of its tip, which presented a livid unhealthy appearance. A solution of nitrate of silver (moderately strong) was applied to this part, and after the fall of the eschar, in five days, the nose resumed its natural color.

A singular case of animal grafting; a cat's tail growing on a cock's comb. By Brown-Sequard, M. D., of Paris.

Every one knows the experiments by which the cock's spurs, or many other textures, have been grafted on the body of an animal, and especially on a cock's comb. I have succeeded in grafting the tail of a young cat on a cock's comb. I performed this experiment in France, in 1850.

After having divided the tail of a young cat, I made a longitudinal incision on a cock's comb, and I united these two parts one to the other, by stitching the cut surface of the cat's tail to the cut surface of the cock's comb. The skin of the cat's tail had been turned a little over itself, so that its internal surface was in contiguity with the cut surface of the cock's comb. Eight days after, I punctured the skin of the tail at a distance from the cock's comb, and blood escaped, so that it was evident that circulation was already established. The tail had been cold during all the day of the operation, but it became warmer gradually from the second day. The union appeared much advanced on the third or fourth day. The tail was entirely fixed on the eighth day.

Unfortunately, on the eleventh day the cock had a fight with another cock, and the cat's tail was torn from the ground on which it had been fixed. I was thus deprived of the opportunity of knowing what transformations should have taken place in the tail. By examining it, I found that all its tissues were fresh, and that its bloodvessels contained blood.

SECTION IX.

ANAPLASTIC SURGERY.

CASE I. *Restoration of the entire upper lip.* By J. M. Carnochan, M. D., Prof. of Surgery in the New York Med. College. American Medical Monthly, 1854.

In April last, I was consulted by a lady, Mrs. O. H., aged 39, the wife of a planter in North Carolina. Her parents had been persons of good constitution, and her brothers, of whom she had several, are free from any manifestations of cachectic diathesis. Although born in a favorable condition of life, this patient, according to her own account, early exhibited signs of strumous diathesis. As early as she can recollect, she was afflicted with pains in the limbs; and, at the age of ten, the glands became affected. Lumps of considerable size would frequently form about the throat and ears, and also a lump in her left breast, about an inch and a half in diameter. A small protuberance had made its appearance on the upper lip, which, to use her expression, was said to be a mother mark. This pimple, or mark, gave no trouble until 1836, about her 22d year of age, when it assumed the character of a sore, with but little secretion for a time, but afterwards accompanied by an unhealthy sanious discharge. The ulceration soon became about three-quarters of an inch in diameter, and seemed disposed to progress rapidly on the surface of the lip. Alarmed at this extension of her malady, she consulted some physicians of eminence, who pronounced the disease cancerous, and recommended recourse to an operation. This proposition was assented to, and an operation was performed. The wound seemed to heal favorably, and the local disease was apparently cured. Her general health, however, remained feeble; and she proceeded to Philadelphia to consult Dr. Dewees, then a distinguished professor in the University of Pennsylvania. Under the care of this physician, her general health became much improved, and for some years she remained in good health, without recurrence of ulceration of the lip. In 1845, she had an attack of malarious fever, during which the lip became tumefied, and ulceration, at the seat of the old sore, broke out again, with more malignancy than ever. The disease again assumed a chronic form, and, under the use of some alterative medicaments, remained stationary for nearly three years. In October, 1848, another exacerbation of the disease took place, attended with excruciating pain and a slight extension of the ulceration. These symptoms were again impeded by the use, as she supposes, of sarsaparilla, and some other unknown medicines. From this time the disease remained almost passive, until January, 1850; at which time, after the birth of an infant, the ulceration began to extend and to invade the entire thickness of the lip, destroying, in its progress, the entire substance of the lip in nearly its whole extent, from the free margin up to the base of the nose; on the right side, the ulceration also extended for more than half an inch, encroaching on the face along the side of the nose, detaching the ala of that side from the cheek, for nearly half an inch. The ulceration had again become passive, when the patient presented herself for my advice.

Her appearance, when first seen by me, was really deplorable. She was much emaciated, and her countenance wore the expression of intense mental suffering. The front teeth of the upper jaw were tolerably sound, but somewhat loose; the two canine teeth were partially, and the four incisors entirely, exposed; the gum, also, corresponding to the incisors, was exposed as far as the base of the nose, and was dry and purple for want of its natural covering.

The ulcerative process had destroyed the entire thickness of the lip up to the base of the nose; on the right side, extending to the angle of the mouth; on the left side, to within one line of the angle of that side. The ulceration had also extended upwards on the right side of the face, beyond the level of the base of the nose, and had detached the lower portion of the ala. The edges of the ulceration were hard, thickened, and irregular; in some parts dried up, in others presenting patches of angry aspect, apparently ready to take on acute ulcerative action upon the slightest exciting cause. There was no glandular enlargement at the base, or near the ramus of the lower jaw.

Viewing the condition of this patient, with such a dilapidated system, deteriorated, also, by perverted constitutional diathesis, I could not be but doubtful of the success of an operation which would have for its object, not only the removal of the diseased tissues, but the restoration of the entire substance and extent of the upper lip. The lady was remarkable for her intelligence, and I explained to her the probability of failure from the nature of her case, and the direful results which might ensue if the necessary incisions of such an operation did not unite. She replied that she wished me to perform the operation, if it were at all practicable, and that she would abide the result with fortitude and resignation. Allowing her a few days to recover from the fatigue of the journey to the city, I assented to perform the operation on the following Thursday, 21st April.

Operation.—The patient being seated on a chair somewhat elevated, and placed so as to be in a favorable light—with a piece of fine earmine, pointed, I commenced by making dots on the face, in the line of the incisions intended to be made. The lower line ran in a direction from the angle of the mouth towards a point a little below the apex of the lobe of the ear; the upper extended from the base of the nose toward the centre of the antitragus; a slight curve, with the concavity looking upwards, being given to each line. One assistant supported the head, compressing at the same time the facial arteries; while another depressed the lower lip with a light curved spatula. Passing the forefinger of the left hand along the mucous surface of the cheek, as far as the anterior margin of the ramus of the jaw, and holding in the right hand a long, narrow, straight bistoury, I transfixed the entire substance of the left cheek on the lower line, at a point corresponding to the anterior margin of the masseter muscle. Carrying the bistoury towards the commissure of the mouth, the entire tissues of the cheek were now divided. Seizing the flap thus formed, between the left forefinger and the thumb, and holding it upwards, the bistoury was carried freely along the line where the mucous membrane is reflected from the upper maxillary bone to the cheek, and made to separate the tissues upwards for some lines from their attachments to the superior maxilla. Still retaining the flap with the left forefinger and thumb, the bistoury was again passed through the substance of the cheek, on the upper line in front of the masseter, and carried forward so as to divide the cheek as far as the base of the nose. A quadrilateral flap was then formed of the tissues of the cheek, containing, in its substance, the orifice of the duct of Steno; which had been carefully avoided while the cuts were being made. The oral side, or edge, of this flap consisted of the indurated and ulcerating margin of the disease. With a pair of strong hare-lip scissors, this margin was removed, so as to leave a free, straight, and healthy margin.

Changing the bistoury to the left hand, a similar quadrilateral flap was then formed, in the same manner, on the right side, from the tissues of the cheek, and the diseased margin disposed of, so as to leave a healthy, straight edge, corresponding to the same edge of the opposite flap. The bistoury was next carried transversely across the base of the nose, so as to remove the diseased

margin at that part, and, at the same time, to vivify the tissues in that direction.

There still remained that portion of the disease which required removal, extending, for about half an inch, along the right ala of the nose. This was removed by incisions so fashioned as to form a triangle, and so as to leave healthy margins, free from any induration.

It now remained to bring together the various bleeding edges thus vivified, and to retain them together by the twisted suture. An assistant now pressed forward the quadrilateral flaps of each side, so as to bring in contact, on the median line, the vertical margins of the two flaps. Four suture pins, suitably placed, maintained the apposition in that direction. A pin on each side was now inserted, so as to regulate the transverse extent of the mouth, and to form the new commissures as near as possible in the site of the old. To unite the lips of the wound in the line of the lower horizontal incision, four pins were inserted on each side; and to effect the same end, along the line of the upper incision, four more pins on each side were inserted. Apposition of the bleeding surfaces across the base of the nose was effected by means of four points of interrupted suture; and three additional points of suture were used to bring together the edges of the triangular loss of substance along the ala of the nose.

The free border of the new lip, formed by the lower margin of the flaps of each side, united in the median line, still presented a bleeding surface. To obviate this, and to regulate the shape of the prolabium, the mucous membrane lining the new lip was drawn over the bleeding edge, and incorporated by four points of twisted suture with the tegumentary tissue.

During the operation there was a considerable flow of blood; but this was easily arrested by the application of the sutures. The operation was performed in the presence of Dr. Williams, Dr. Horace Green, Mr. Maurice Peugnet, and several other medical gentlemen; and I was ably assisted by my friend, Dr. J. J. Crane, and by my colleague, Professor Barker, who administered small doses of chloroform during the different steps of the operation.

Progress and completion of union.—Operation performed on Thursday, April 21, 1853. Patient went on well until Friday, at midnight, when she complained of a good deal of pain in the right cheek and forehead. This was eased immediately by applications of tinct. of aconite. On Saturday, a slight puffiness of the right side was observed; this commenced at the root of the nose, and gradually extended until the upper portion of the cheek and eyelids were considerably swollen.

Sunday. Patient comfortable, and swelling of right side considerably diminished.

Monday, 4th day. Swelling almost entirely disappeared. Five pins removed this day from points where union seemed most complete. Three suture ligatures also removed; patient feels very well.

Tuesday, 5th day. Favorable symptoms continue; eight pins removed, one of which is from the mesial line of union of the lip. Union has taken place along all the incisions, except that at the base of the nose. Here, at the point where the interrupted sutures were used, there is suppuration for about one-third of an inch. The points of suture at the angles of the mouth and at the lower part of the labial median incision, still allowed to remain, although there is adhesion at these places. The sutures along the prolabium removed. Patient complains of weariness from want of exercise, but feels perfectly well otherwise; pulse 98.

April 28, 7th day. Removed seven more of the pins. Still leave in those at the angles of the mouth. Patient tolerably comfortable. Union at the

angles of the nose has not taken place by adhesion; apparently the surfaces begin to granulate in a healthy manner. No fever; pulse somewhat irritable; continues to use fluid material for food.

Friday, April 29, 8th day. Removed the pins at the angles of the mouth, and the two lower pins at the median line of union of the lip. Union perfect everywhere along the incisions, except at the base of the nose; slight adhesions here. Granulating process proceeding well. Patient much more comfortable to-day, than since the operation.

April 30, 9th day. The parts along the base of the nose continue to granulate apparently healthy. A slight slough is evidently being thrown off along the median line of union of the lip, nearly as far as the free border, though not through the entire tissues of the new lip. The entire line of all the other incisions has firmly united.

May 1, 10th day. Dressed the lip. The slough separates, and will probably leave the new lip entire.

2d, 11th day. Dressed the lip. The slough continues to separate; it is superficial, and leaves the lip entirely continuous. General health as good as usual.

3d, 12th day. The slough has separated, and proves to be merely superficial. Granulation is proceeding well. Patient comfortable.

4th, 13th day. The lip where the slough separated is granulating finely, and new skin is beginning to appear; patient feels well.

14th, 23d day. Union complete; cicatrization perfect. New lip formed.

Shortly after this date, the patient left New York for her own home, with the character of her face restored to its natural aspect, and in much better health and spirits than she had enjoyed for many years; feeling, as she remarked, as if she "inhabited another body."

CASE II. *Congenital absence of the nose; new rhinoplastic operation.* By M. Maisonneuve, Surgeon to Cochin Hospital, Paris. Dublin Med. Press, 1855.

Among the defects of conformation of which the human face may be the seat, there is one which must be of extreme rarity, as I have been unable to discover any record of its occurrence; I allude to congenital absence of the nose. A case of this kind having recently come under my notice, I have thought it would be useful to publish it, and at the same time to make known the novel proceeding by means of which I succeeded in remedying the deformity.

Eugénie Marotte, aged seven months, was born strong and well formed, except that her face was completely devoid of any nasal prominence, and that in place of this natural projection there existed only a plane surface pierced with two little round openings scarcely one millimetre (0.03937 inch) in diameter, and three centimetres (1.1811 inches) distant from each other. In addition to giving the child a most grotesque appearance, this deformity occasioned her much inconvenience in the act of respiration, and therefore in that of sucking. In these two points of view, consequently, it was important to remedy this faulty conformation, and for this purpose her parents came to Paris to consult me.

No similar instance having been known to science, the ordinary rhinoplastic processes were, of course, inapplicable to the case. I, therefore, devised the operation I shall now describe.

On the 18th of May, 1855, the child having been previously placed under the influence of chloroform, I carried inwards, from each of the nasal orifices, a transverse incision one centimetre (0.393708 inch) in length. Two vertical

incisions, commencing from the inner extremities of the preceding, were now directed towards the free edge of the lower (*sic*) lip, near which they were brought together so as to form a V. From these latter incisions resulted a narrow flap comprising the entire thickness of the lip; it was dissected and horizontally raised to form the inferior septum of the nose.

There then resulted a true artificial hare-lip, the edges of which I united by means of the twisted suture. But to obtain this union, it was necessary that the space comprised between the nasal openings should be shortened by the entire width of the flap detached to form the septum, and that, consequently, a projecting fold should be formed at the expense of the intermediate skin. This fold, supported by the artificial sub-septum, constituted a perfectly regular nasal prominence.

In order to understand completely the mechanism of the operation, it is sufficient to repeat it on a piece of paper, when it will be immediately seen how satisfactory the result is.

The final issue was not, however, obtained without some trouble. The infant, irritated with pain, did not cease, during the first twenty-four hours, crying, so to speak, and struggling; the consequence was a partial disunion of the points of the upper suture. This, however, was attended with the incidental advantage of suggesting to me an improvement in the operation for hare-lip.

This improvement consists in the subcutaneous division of the orbicular muscle at each side of the wound, in order to prevent its contractions from tearing open the cicatrix.

Thanks to this improvement, union took place without difficulty, notwithstanding the uneasiness of the little patient; and at the time of her departure from Paris, the cure was complete.

The nose was of a very regular shape, and the openings of the nostrils being ample, admitted of easy respiration.

CASE III. *Transplanting a sheep's tooth into the jaw of a child.* Dublin Journal of Med. Sciences, 1843.

In 1841, Mr. Twiss, of Kerry, extracted a broken front tooth from a young lady, aged twelve years, and put in its place the front tooth of a yearling sheep, reeking from the jaw, having shortened its root a quarter of an inch. After the first week the tooth, at first being much too small for the space, became more and more firm, and has enlarged, but not so much as it would have done in its pristine state; a circumstance observed in transplanted trees. Mr. Twiss selected the sheep from the extreme cleanliness of that animal, and the beauty and aptitude of the teeth, at two or three years old, when about the size of adult human teeth, and more likely to grow when transplanted. The root may be shortened or pared to fit and kept *in situ* by waxed silk ligatures.

SECTION X.

IMMENSE TUMORS.

CASE I. *Tumor weighing two pounds successfully removed from an infant four months old.* Lancet, 1835.

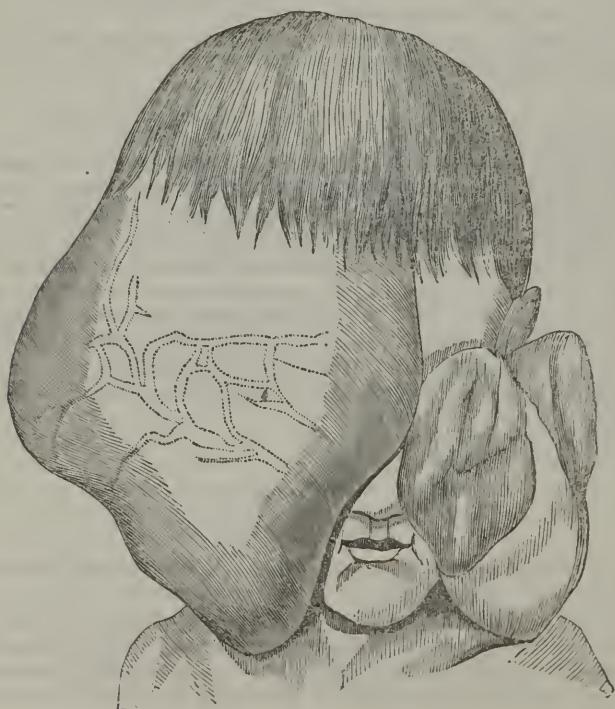
Mr. Costello detailed the particulars of a tumor (laid on the table) which had been taken from a child, then four months old, by Mr. Renwick, one of the Surgeons of the Canterbury Hospital, now weighing full *two pounds*, but at birth not exceeding three ounces. The tumor (congenital) was situated at

the lower end of the spinal column, at the extremity of the os coccygis, not implicating the rectum. It was removed by successive ligatures; no irritation was at first produced, but after eight days the irritation was so high that the mother expected the death of the child to ensue. On the 22d day the tumor separated from its bed, the pedicle measuring about two and a half inches in circumference. The cicatrix left at the part of separation was very peculiar, and might be likened to the fractured extremity of a fresh cabbage-stalk, when broken in halves. The cicatrizing surface was red, but no exudation had since occurred from it. The substance of the tumor it would be difficult according to existing nosology to define, but the term "lardaceous" he believed would be the most appropriate. The child did well, and was now in perfect health. The growth of the tumor absorbed, apparently, all the nutriment derived by the child.

The size and denseness of the structure, which was almost semi-cartilaginous, in such an infant was considered, generally, as very remarkable, and almost without parallel.

CASE II. *Immense fungus hæmatodes in a child; death.* By Wm. Bainbridge, Esq., M. R. C. S., of Tooting, England. Pattison's Medical Register, vol. ii., 1835.

The patient, a child four years of age, was the subject of the disease about two years. It commenced in the left eye, producing loss of vision, and the appearance of a speck on the retina, which looked like "polished steel," the pupil became fixedly dilated, and of a greenish hue. As the disease progressed, symptoms were produced very like cataract and amaurosis conjoined,



in consequence of the tumor at the bottom of the eye very exactly representing an opaque lens. The conjunctiva was now vascular, the globe very irregular, the iris pushed forwards, and shortly afterwards the sclerotic ulcerated, and the fungus appeared in the shape of large, red, exuberant granulations. Either at this stage or a little previous, an operator would extirpate, but mark the inevitable result. A small, hardish tumor is discovered a little anterior to the lobe of the left ear; it soon became more elastic and unequal, and increasing in all directions, produced a circular, flat, mushroom-like growth, which covered the ear and the neck nearly as far as the shoulder, and extended up the temple. It ulcerated early, and then the external surface was irregular and flat, appearing to be covered with a serous membrane, dried by exposure to the atmosphere, dotted with numerous red points, and exuding a sero-purulent fetid discharge. Both this and the fungous eye bled a few drops occasionally. A little before this period the right temple began to exhibit a slight bulging, which on examination was ascertained to be a tumor with a broad base, having the feel as if it were a cyst tightly filled with some thinnish fluid, the color of the skin unaltered, surface even, and no pain complained of. In the course of time it became unequally developed, and on kneading it, felt very much like an India rubber foot-ball not quite full of air. When it had attained a considerable size, it was very difficult to decide whether or not it was an encysted fluid; indeed the surgeon under whose care he was admitted, punctured it, in order to ascertain whether it did or did not contain fluid. At the period the drawing was taken, this last named tumor projected several inches from the temple, extended over the right eye, partly across the mouth, and afterwards nearly reached the shoulder. The skin then looked thin, translucent, polished, and blue veins, as seen in the drawing, meandered in various directions; though so considerable in size, it never ulcerated. It is rather singular this patient appeared to suffer so very little from pain. He died from mere exhaustion and inanition. No post-mortem could be obtained.

CASE III. *Immense pachydermatocoele successfully excised.* By Valentine Mott, M. D., Emeritus Professor of Surgery in the University of New York. London Medico-Chirurgical Transactions, 1854.

Upon the election of this most distinguished Surgeon to Membership in the Royal Medical and Chirurgical Society of London, he transmitted to that body a valuable paper, containing several cases, which is published with its annual Transactions. We present the case bearing the above title from the *New York Journal of Medicine*, 1855.

This was a truly monstrous morbid production. Though disgusting and even frightful, to ordinary beholders, there was, in its organization and external characters, looking at it as a morbid growth, something symmetrical and beautiful. From the mother's statement, it was observed soon after birth. Miss L——, æt. about 45 years, of robust country health, came to me from the western part of the State of New York, as she said, to show me a tumor, and to know if it could be removed. From the compact and regular arrangement of her dress, the impression on my mind at once was, that it was of no great importance as to size. My astonishment was not a little excited, as she removed her dress from the chest and neck, not only from the immense size of the mass, but that it could all be so completely stowed away as not to disturb the apparent symmetry and harmony of her proportions. The tumor was of a dark brown or copper color, of a soft, elastic feel, very much resembling a collapsed lung or placenta. It hung in beautiful and fantastic folds, like the convolutions of a tippet over the neck, shoulder and chest. There

were five of these folds or stories, the smallest above, the longest or broadest below. It was attached to the healthy integuments behind and in front of the ear, directly under its lobe, to the entire extent of the side of the neck from near the nucha to the edge of the larynx and trachea, to the whole line of the clavicle and middle of the upper bone of the sternum, over the shoulder, part of the scapula, and reaching upon the arm to near the insertion of the deltoid muscle—over the entire pectoralis major to the middle of the sternum and ensiform cartilage, and to the upper part of the rectus abdominis and latissimus dorsi, with a portion of the serratus magnus anticus. The lowest loose fold hung a little below a line with the umbilicus. The entire length of the tumor was twenty-one inches, its breadth eighteen inches. Stating to her that I thought it might be removed, she requested to have the operation performed if there was, as she said, “any chance of her life.” Being made insensible with chloroform, the operation was performed in the following manner.

An incision was made a little below the tumor across the lower part of the deltoid muscle, and the growth was dissected from this muscle to the top of the shoulder, then from the side of the thorax and upper part of the abdomen; then from the whole line of the clavicle, the upper part of the sternum, the back of the neck, and from the trapezius muscle, it was now detached from about the ear, and the dissection continued towards the front part of the neck, in the direction of the course of the sterno-cleido mastoid muscle, until it terminated by an incision over the mesial line of the larynx and trachea in their entire length. In all this extensive dissection many arteries required ligatures, and some of them were of considerable size. The most remarkable, and indeed monstrous, were two veins entering the subclavian, no doubt the external jugular in its anterior and posterior branches, each apparently separate. Their size was the greatest I ever saw in any superficial veins, being each not less than my forefinger. They were running close together, and were seized successively the instant on being cut with the forceps, and were tied to prevent the admission of air, from which, on one occasion, I had seen frightful and almost fatal effects. As the tumor originated on the upper part of the neck, these two enormous superficial veins were probably the principal channels for returning the blood from the whole abnormal mass. They lay side by side, as they went through the deep cervical fascia, but probably just on entering the subclavian, they united, as is usual in the normal state. As the operation was considerably protracted, from the extensive superficial dissection, and the large number of arteries which required ligatures, some exhaustion followed, but she was not alarmingly depressed at any moment, and quickly rallied when the anæsthesia was allowed to pass off.

With the exception of two attacks of erysipelas, one of which imminently threatened the life of the patient, the case progressed favorably, and resulted in complete and permanent recovery. The specimen was submitted to microscopical examination by Prof. Swett (not Lovett as the English print has it), who thus reported: “The specimen appears to me to consist of an hypertrophy of the skin, and of the subcutaneous cellular tissue. Under the microscope I find nothing but an exaggeration of the natural tissues. There are no evidences of a malignant formation.”

CASE IV. *Osteo-sarcomatous tumor arising from the ilium, weighing from thirty to thirty-five pounds; death.* By Geo. K. Holloway, M. D., formerly of Warrenton, Georgia. Southern Med. and Surg. Journal, 1836, vol. i.

I, Henry Augustus Franklin, was born on the 9th of February, 1800, and from my childhood up to manhood, enjoyed uninterrupted health; and being

blessed with a good constitution, and having for the last four or five years been singularly afflicted, am desirous of giving, in my own language, a short history of my case, to wit :—

In October, 1831, I was attacked with intermittent fever, which continued about two months. After the fever had apparently left me, I was troubled with a great enlargement of the spleen until the following February. During this time I was attacked with severe pain in the right hip, which I thought sciatic or rheumatic, and treated it accordingly, without finding any relief. In January, 1832, my health somewhat improved; I began to work, and continued at work, until May; my health continued to improve, but the pain still continued. In feeling my spleen often during this time, I discovered that it was reducing very fast. About the last of February of the same year, I felt something of a hard substance of rough bumpy shape in my right groin, which was firmly seated in the cavity of my right hip. During the time from February on some months I felt that the action of my right leg had failed, particularly when lifting anything; running or going up steps, etc.

Feeling much alarmed, I made early application to Dr. David Cooper, of Wrightsborough, who after examining the case, stated that he had no knowledge of it, and recommended me to go and see Dr. Antony, of Augusta, whom I visited in March of the year 1832. Dr. Antony after some reflection recommended the use of iodine ointment, which I used constantly for two months without receiving any benefit. Several of my friends believing it to be rheumatic pains, recommended me to blister-plasters, which I applied, and kept it sore and running for several weeks, which instead of benefiting, injured me very much. The pain continued intensely, and my friends yet believing it rheumatism, I was advised to visit the mineral springs. I went to the Indian Springs and bathed and used the water for more than a week, and receiving no benefit, I went to the Warm Spring, in Meriwether County, where I spent eight or nine days, bathed frequently, but found no relief. I returned home much worse than I left it, owing to the fatigue, hard lying, etc., the pain in the hip joint still increasing; so much so, that I could not sleep. When at the Warm Spring, not being far from Columbus, I went there and saw Dr. Cooper and Dr. Nicholas Childers, a man of much skill in his profession, who examined me, and was somewhat of opinion that an operation would prove successful, if the warm season had passed. The pain still increasing and the thigh shrinking a little.

On my way home, I called on Dr. White, of Milledgeville, who very politely invited Drs. Fort, Boykin and Brown to associate with him in an examination of the tumor, which had very much enlarged by this time. After a careful examination by them, Dr. White inclined to the opinion of cutting the tumor out, and was of the opinion that it might be done with safety. The others differing with Dr. White, and thinking it impracticable, he would not undertake it without their assistance and concurrence. From this time on to November, I suffered the most excruciating pain, my leg gradually shrinking and the tumor enlarging, yet I was enabled to walk without the aid of cane or crutches, and my general health was good. About the last of November, I determined to go to Augusta, as the Medical Faculty were in session, to see if I could get anything done to relieve my pain, which was now almost insupportable. On my way to Augusta, I called on Col. Z. Williams, and his son Dr. R. Williams requested (if the board of physicians should not do anything for me) to call as I returned and spend some time with him. When I arrived at Augusta, I was examined by many of the medical men, who did not advise any course particularly for me to pursue.

I came to Dr. Williams very much disheartened, and suffering so much, that I did not think I should long survive.

Dr. Williams put me under a strict regimen of diet, restricting me in my food, and giving me gentle purgatives, until he reduced me very low. Towards the latter part of January, 1833, I had lost the use of my leg, which was probably occasioned by my lying in one position such a length of time; the tumor still increasing, yet I believe the pain was not so severe. In February, I returned home, and began eating more, and my leg began to gain strength, which was the case from January to September. I did not restrict myself so much in my diet, and was able during that period to walk about the neighborhood; nevertheless, I was never a moment free from pain, and it was very painful for me to sit any length of time. The pain was all the time in the right hip-joint.

Believing from the first appearance of the tumor that nothing short of an operation would relieve me; and having during the summer become acquainted with Dr. Holloway, he was of the opinion that it could be taken from me successfully by the skilful surgeons of the north. Dr. Holloway immediately wrote to Drs. McClellan and Hewson of Philadelphia, stating the progress of the case, who promptly answered him that from what he had stated, they believed it could be taken from me successfully. He gave me letters of introduction to them, and on the 11th of September, 1833, I started for New York.

At Augusta, my friend Dr. Antony visited me, and advised me as I had started, and as my mind was made up to get all the medical skill in my reach, to go on, and accordingly gave me a letter of introduction to Dr. Dickson of Charleston, also one to Dr. Mott of New York. At Charleston I was visited by Dr. Dickson and several other intelligent medical men, who examined my case strictly, and gave as their opinion, that no surgeon having any regard for his professional character would operate on me. I remained in Charleston seven or eight days, during part of which time I was very unwell; the tumor continually increasing in size, but never painful. After I got over my sea-sickness, I began to improve very fast in my general health, and when I reached New York, my strength was much greater than when I left home, and the pain in my hip not so excruciating as before.

At New York, Dr. Valentine Mott examined me very attentively and was clearly of opinion that an operation would produce certain death. His words were, "I would as soon cut your throat to save your life, as to cut that tumor from you with the expectation of saving you." At Philadelphia, Drs. McClellan, Hewson and Pattison examined my situation, and all of them, except Dr. McClellan, were opposed to having it cut from me. He stated, that he believed he could extract or take it away without endangering my life; but was of opinion that if taken away it would return again, that it was a disease of the blood. I did not see the venerable Dr. Physick, although I had a letter of introduction to him, and my brother called twice at his residence, yet he was so closely engaged in an important case from Missouri, that he never saw me. The pain in my hip still continuing and the tumor enlarging, Dr. Mott wrote to Dr. Antony on the subject, in answer to his letter, which had recommended the use of iodine. From Philadelphia I went to Norfolk *via* Baltimore, and was there visited by several medical men of the borough, who looked upon my case as an unparalleled one in the history of diseases. Dr. Mott was the only one who stated that an almost similar case had fallen under his observation. From Norfolk we returned to Baltimore, and from thence took passage in the brig Gen. Marion, to Charleston, where I arrived with my health much improved, and in three days after,

reached home about the 20th of October. During the fall and winter I enjoyed very good health, although the pain continued very severe and the tumor continued to enlarge.

About twelve months previous to this time, I suffered much pain in my right leg from my hip to my ankle, at intervals so severe, that it seemed as if some person had hold of the nerves jerking them.

My health continued very good until the 1st of September, during which time I was able to walk about the neighborhood, by resting frequently; my thigh and leg having shrunk to a mere skeleton of a limb. About the 1st of September, 1834, I was taken with an ague, and fever succeeded it, and both continued on and off for two weeks; at this time my thigh commenced enlarging at my hip, and my ankle also became swelled, which would appear and then recede for several days, until the swelling passed over the whole limb, and has remained so ever since. In the latter part of November, I had a severe ague, and when the fever came on, from my ankle-bone to my arm-pit on the right side appeared as if mortification would soon follow. I called in Dr. McCraven during this time, who succeeded in stopping the fever, and by poulticing the part inflamed, it at length recovered its healthy appearance. All this time the pain was intense and the place still enlarging. During the spring and summer of '35, I became able to go about with my crutches; at this time the course of the tumor was such as to throw my hip entirely out of joint, which it effected slowly, but attended with indescribable pain. This was very apparent from the twisted position in which my foot and ankle were placed; and during the summer Dr. Williams visited me, and had no hesitancy in declaring that the hip was out of joint. I continued pretty much in this situation, suffering extreme pain, until about the 1st of November, when I was taken by another ague, which lasted for several hours and left me prostrate. Soon after this, large blisters formed on my leg, and run much water, then became sore and appeared like the worst kind of ulcers. They however soon dried up. In the course of three weeks I had another ague which carried me back to my former prostrate condition; similar blisters formed and similar sores upon my leg, which in the course of two or three weeks would dry up. In January, 1836, I was taken about one o'clock with an ague, which continued on me till after three. From that time to the present, I have been helpless; my leg and thigh large, apparently ready to burst, blisters formed and running sores came in their places. The tumor has been constantly growing, and a few days ago some blisters formed near the rough points of the tumor, and on pricking them with the point of a needle, matter issued from them; and now a hole sufficiently large to take in the end of a walking cane has opened, and large quantities of matter run from the place daily and hourly, of a light cream color and not offensive to the smell. For the last month or two the pain in my hip, knee and ankle has not been as severe as it was previously. During the whole of my severe affliction, which has been upwards of four years, a great many prescriptions have been given, and I have tortured myself with many applications without receiving any benefit. My only medicine, since I returned from New York, in 1833, has been opium and laudanum, which I have used unsparingly, and it is all that has in the least mitigated my sufferings: therefore, I would recommend it to all who are similarly situated.

Dr. Holloway has also furnished us with an account of the post-mortem and autopsic appearances, together with some additional facts appertaining to the case; amongst which is a reference to a slight injury of the anterior superior spinous process of the ilium of the right side, previous to the appearance of the disease, which he supposes to be, and we think very correctly, the

exciting cause of this dreadful case. The rest of the additional facts will be found in the notes of Dr. H. appended to Mr. Franklin's narrative.

Mr. Franklin died on the 5th of March last. The following is Dr. Hollo-way's account of the post-mortem and autopsic appearances.

On the morning of the 6th of March, being eighteen hours after death, we proceeded to the autopsy, in the presence of Dr. Henry Lockhart of Warrenton, Dr. Edward Jones of Wrightsboro', Mr. S. Irey, a medical student, and several respectable gentlemen.

External appearance. The countenance natural, with the exception of being very much shrunk and wasted by disease. The body appeared as that of a person laboring under dropsy, only very much larger. The right lower extremity was enormously swollen—the foot elephantiasic—the left limb was a perfect skeleton in comparison—the arms literally skin and bones. The stench arising from the body was peculiar in kind, and extremely offensive; for the correction of which we washed the body, and injected the cavity of the tumor through the ulcerated opening with a disinfecting liquor—concentrated solution of chloride of soda. The integuments for 12 inches around the opening into the tumor, were sphacelated. Such were the external appearances.

Autopsy. A crucial incision was made from the scrobiculus cordis, to the symphysis pubis; and from the anterior superior spinous process of one side, to that of the other. When the flaps thus made were turned aside, the tumor only was brought into view; the rest of the abdominal contents being completely hid, except the omentum, which was very much shrunk—very small—not more than one-quarter of the usual size, and appeared very much like that of a person who had for a long time labored under chronic dysentery or some other chronic inflammatory affection of the abdominal viscera. Upon dipping down and bringing into view the stomach and small intestines, they presented an anomalous appearance, evidently showing the ravages of disease. The spleen was more than twice its normal size—the kidneys of more than three times their usual size; the pancreas very nearly obliterated; the liver very much enlarged and deeply tinged with bile; the gall-bladder more than five times its ordinary diameter, and full of bile; the bloodvessels generally, but more especially the larger, in a state of high inflammation. Such were the phenomena presented by the viscera of the abdomen.

The thorax was next examined: the lungs healthy; the heart very much enlarged; the bloodvessels very similar in appearance to those in the abdominal cavity; the villous or mucous coat of the bronchia not injected.

The tumor completely filled the whole of the abdominal cavity, except a very small space in the left hypochondrium. It appeared to have originated and proceeded from the anterior superior spinous process of the ilium of the right side, and to be closely and firmly attached to the whole of the inner concave surface of that bone, dipping down and covering the whole internal surface of the os pubis, part of the ischium, almost the whole of the sacrum, and adhering on the right side to the whole of the lumbar vertebræ and from the centre of the diaphragm near the heart, protruding through the femoral ring below Poupart's ligament, and under the fascia lata of the thigh to within a few inches of the knee.

Great care was not taken in dissecting out the tumor, consequently all that part below Poupart's ligament was left untouched in the thigh, and in some places where it was dissected it was certainly not less than an inch or two thick.

The tumor, if we may be allowed the expression, was what might be denominated a fatty tumor, interspersed with osseous granulations of the size

of small squirrel shot, some larger. In fact when cut into it had very much the appearance and firmness of the fat part of a brisket of beef.

The following are the dimensions and weight of the tumor, after excision, and the comparative size of the two limbs:—

Transverse diameter of the tumor,	.	.	.	.	18 $\frac{3}{4}$ inches.
Longitudinal " " "	.	.	.	.	24 $\frac{1}{4}$ "
Diagonal " " "	.	.	.	one way,	22 $\frac{3}{4}$ "
" " " "	.	.	.	the other way,	25 $\frac{1}{4}$ "
Circumference,	.	.	.	.	61 $\frac{1}{4}$ "
Weight of the tumor,	.	.	.	.	26 $\frac{3}{4}$ lbs.

Left or sound Limb.			Right or diseased Limb.		
Around large trochanter,	.	18 in.	Around large trochanter,	.	29 $\frac{3}{4}$ in.
Middle of the thigh,	.	12 "	Middle of the thigh,	.	25 $\frac{1}{2}$ "
Above the knee,	.	10 $\frac{1}{4}$ "	Above the knee,	.	21 $\frac{1}{2}$ "
Below the knee,	.	11 "	Below the knee,	.	19 "
Calf of the leg,	.	9 $\frac{1}{2}$ "	Calf of the leg,	.	19 $\frac{3}{4}$ "
The instep,	.	13 $\frac{1}{4}$ "	Above the ankle,	.	13 $\frac{3}{4}$ "
Middle of foot,	.	10 $\frac{3}{4}$ "	Instep,	.	16 $\frac{1}{2}$ "
			Middle of the foot,	.	13 "

The tumor, if neatly dissected out, would have weighed at least from 30 to 35 pounds.

CASE V. *Immense exostosis of the os innominatum, (occurring after amputation of the thigh and at the hip-joint, successively, for exostosis of femur); death.* By Prof. Van Buren, at the New York Pathological Society, April, 1855. New Jersey Med. Reporter.

Prof. W. H. Van Buren exhibited an enormous specimen of *exostosis* involving the whole of the left *os innominatum*, taken from a patient in whom he had performed amputation at the hip-joint for a similar disease of the *os femoris* nearly five years before, and who had recently died. The morbid growth had been reproduced in the acetabulum within a year after the amputation, although at the time of the operation it was perfectly healthy, as well as the head of the femur, which was also presented to the Society. Since the disease reappeared, it had continued to grow steadily and regularly until it had reached its present immense size and weight, 18 pounds. The patient died at a distance from the city with obscure cerebral symptoms, not immediately connected with the present disease.

The particulars of this case were reported in full to the Academy of Medicine soon after the patient's recovery from the amputation of the hip-joint, with wood-cuts representing the disease removed at that time (May, 1850), and the morbid specimens were presented at one of the meetings of this Society. The exhibition of the present specimen, therefore, completes the pathological history of the case.

In resuming the history of the case from the period where the record in the *Transactions* of the Academy leaves it, there are but a few circumstances of importance to be noticed. The morbid growth spread from the acetabulum where it first reappeared, until it gradually involved the whole bone. It pushed the soft parts before it, causing constant and sometimes severe pain, presenting everywhere an irregularly nodulated surface, very hard to the touch. It projected upwards until it came in contact with the lower ribs, and growing inwardly towards the median line, it encroached materially, toward the close of the patient's life, upon the pelvic and abdominal cavities, so as to interfere with the functions of the rectum and bladder. The patient used opium habitually to relieve his pain, but when last seen by Dr. Van Buren, in the spring of 1854, four years after the

operation, his general health was still good; he ate and slept well, and was not losing flesh. Soon after this he left the city to reside in New Jersey, where he died in February, 1855. No accurate account has been received of the immediate cause of death, which seems to have been preceded by cerebral symptoms. Through the kindness of Dr. A. T. Pettit, of Long Branch, who examined the body, the specimen now before the Society was obtained.

It is only by comparing together the three preparations which comprise the whole of the femur in two pieces, and the os innominatum, and which are now placed in their natural relation to each other, that the true nature of this extraordinary disease can be thoroughly comprehended. The first is a dried mass of bone weighing $8\frac{1}{2}$ pounds, comprising a little more than the lower half of the *os femoris*, where it was sawn through at the first operation to which the patient was subjected, viz., amputation of the thigh in May, 1848. This tumor had been growing for a period of 16 years. It is a lamellated exostosis sprouting from the whole surface of the *os femoris* throughout its lower half, including its condyles and their articular surfaces.

The second specimen is the remaining, or upper portion of the femur, with the reproduced disease growing from its lower extremity; this is preserved in spirits, and shows the attachment of the sciatic nerve to the bony growth by which it is surrounded, thus explaining the severe character of the pain for the relief of which, mainly, the second operation was undertaken. This is also a pure bony growth or simple exostosis.

The third and last is the huge mass, weighing 18 pounds, and consisting of an osseous outgrowth from the *os innominatum*, and apparently from every portion of the surface of this bone. This recent preparation is evidently identical in character with the disease of the femur. It has been examined microscopically by Dr. Isaacs and myself, and the only histological elements which it contains, are those of true bone and fibrous tissue. At one point striped muscular fibre was found in the interior of a cancellated bony nodule, corresponding in position to the dorsum of the ilium; this was supposed to be a portion of the glutei muscles included in the bony growth, and not yet deprived of its characteristic appearance. (Drawings of these microscopical appearances were submitted by Dr. V. B.)

The surface of this tumor is covered by a layer of tissue varying in thickness at different points from the fraction of a line to half an inch and more. This is nothing more than periosteum; under the microscope it consists of white and yellow elastic fibrous tissue only. When I first examined the specimen from the femur seven years ago, I was under the impression that this contained cartilage cells; but in this specimen there are no cells of any kind whatever, except those which characterize the processes of exudation and transition, as met with in the reparative process and in benign growths.

The specimens before the Society, therefore, are simple exostoses, or bony outgrowths; and there is nothing in their histological character which warrants any suspicion of cancer, although the disease was so often reproduced.

CASE VI. *A most enormous osteo-sarcomatous tumor of the pelvis and thigh.* Lancet, 1827, vol. xii.

Arising from and covering the whole of the left os ilium, the ascending ramus and tuberosity of the ischium, adhering to the symphysis pubis, and the edges of the thyroid foramen, and involving the two superior thirds of the thigh bone, is an osseous growth of most prodigious size, which measures 24 inches in circumference. This tumor projects most considerably from the

ilium, where it forms a tumor, which is attended with so much deformity as to arrest the attention of every eye. The surface of the disease is extremely irregular, forming at several places knots of various sizes; it is not completely composed of bony matter; at several points it is soft, its structure being apparently interspersed with fleshy materials. The situation of the trochanters is well marked, as they seem to be lengthened out by osseous deposition; the motions of the hip-joint are entirely lost; the articulation is immovably fixed, and is preserved in a semiflexed state. The man is scarcely able to move, lying generally on a bed with his body prone. He experiences constant and severe pains, to alleviate which he is obliged to be constantly under the influence of narcotics. The tumor, from passing so far backwards, obstructs the discharge of the feces; his general health has suffered much; he is weak and emaciated.

The disease commenced thirty-eight years ago, after the receipt of a kick on the ilium from a horse; this was followed by a small hard swelling, which nine years ago began sensibly to increase. During the last four years it has enlarged with astonishing and alarming rapidity.

This enormous tumor, the largest of the kind we recollect ever to have seen, has all the characters and appearance of the osteo-sarcomatous enlargement. The case is one of a melancholy and hopeless nature, and palliative remedies, with a view of relieving his sufferings, were all that Mr. Wardrop had it in his power to recommend.

CASE VII. *Excision of an enormous tumor from the groin of a woman; recovery.* By Richard Smith, Surgeon, Bristol Infirmary. *Lancet*, 1834, vol. xxvi.

The subject was Elizabeth Harris, a widow, aged fifty-five, from South Wales. A pyriform tumor hung from somewhat under Poupert's ligament, to about three inches below the knees.

It weighed six pounds, and the wound in the integuments, lengthwise, measured ten inches. She ascribed the commencement of the tumor to a violent blow received in 1820, since which time it had been gradually increasing in size. She suffered no pain, but was exceedingly inconvenienced by it. I removed it on the 11th of February last. It was not necessary during the operation to tie a single artery, but the venous hemorrhage followed every stroke of the scalpel in such profusion, that in spite of the very able assistance I received from immediate digital pressure upon the mouths of the severed vessels, I had very serious apprehensions, more than once, that the patient would have sunk. I performed the amputation as rapidly as possible, when, having secured three very large veins, all bleeding was at an end.

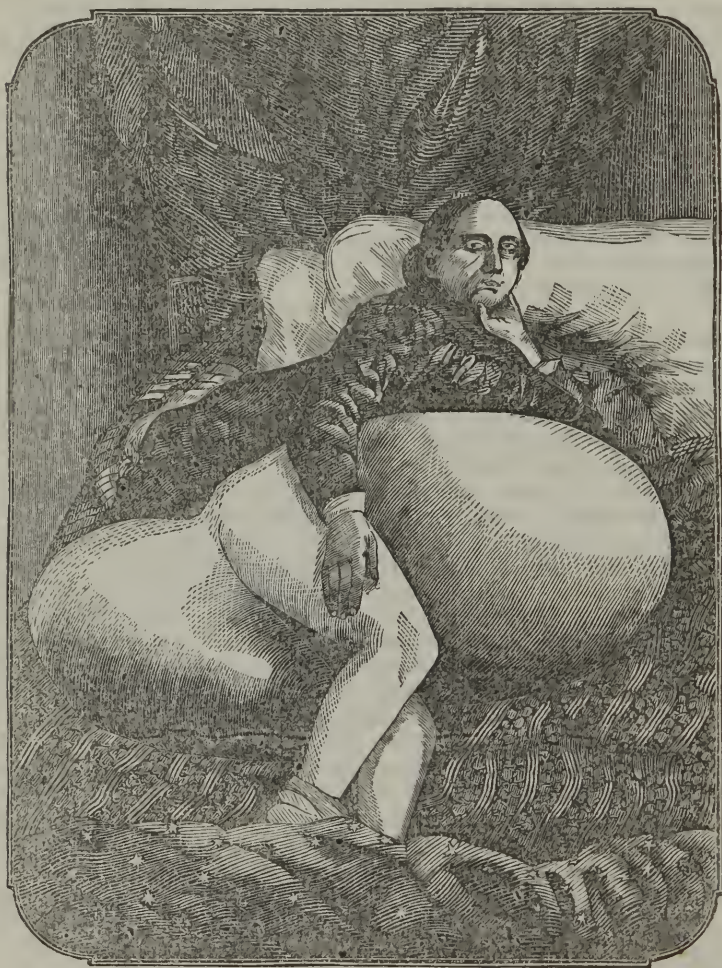
The woman had no unpleasant symptom, the ligatures soon fell off, and the edges of the wound closed kindly, so that at the expiration of a month the open wound was reduced to a couple of inches. The patient, however, not finding her quarters very disagreeable, remained in the house two months in all, when she went home quite well, and in excellent spirits.

The tumor contained within the areolar tissue a large, hard, horny body, wearing, in my judgment, quite a malignant character, but as its removal was complete, and I have heard nothing since of my patient, I presume that "all is well."

CASE VIII. *An immense abdominal tumor weighing about one hundred and seventy pounds.* By P. J. Buckner, M. D. *Proceedings of State Med. Society of Ohio.* *Ohio Med. and Surg. Journal*, 1852.

While in attendance upon the meeting of the State Medical Society, in June last, Charles H. Beach, M. D., of Wellington, Lorain County, called

upon me, and gave such a description of a case of supposed ovarian disease, as induced me to visit the lady, a distance of two hundred and twenty miles, for the purpose of taking a history of the case; and, also, a drawing of the tumor. Accordingly, having procured the services of Mr. Johnson, a daguerreotype artist of the city of Cleveland, we reached the house of the patient, and received from herself the following history of her case: We confess that the appearance, on actual inspection, so far exceeded our anticipations, that we fear all we shall be able to say will convey but a faint idea of the appearance of the patient, as she lay upon her couch.



Mrs. D. is in her 33d year, and has had five children. While pregnant with her first child, and in the sixth month of utero-gestation, she received an injury in the abdomen, over the right iliae region. From this time she dates her disease. She, however, carried her child to the full time, and after a tedious labor, was delivered of a healthy child in June, 1838. Nothing

unusual occurred, after the accouchement, except that she suffered from soreness in the right side, and pain and weakness in the loins. In September, 1840, she was delivered of her second child. Six weeks previous to her confinement, she lifted a heavy kettle, and hurt herself. After she recovered from a swoon, as she supposes, she found herself lying upon the floor. When she arose, she discovered a small tumor protruding from the vagina, which, upon lying down, did not disappear. This singular tumor has continued ever since, and as the further history will show, forms a remarkable feature in the case. For the sake of distinction, we shall denominate it *vaginal tumor*.

After the birth of her second child, for a period of eleven months, she continued in delicate health. She became pregnant the third time, and had advanced to the third month of gestation, when she became frightened at the sight of a large rattlesnake. She felt immediately the symptoms of labor, which in a few hours resulted in abortion. This occurred in 1841. Three days after, she took cold, having pain in the back, and tenderness and fulness of the abdomen. Her right side became sore to the touch, which increased, until it was so sensitive that even the weight of the bedclothes was oppressive. She became pregnant the fourth time, and was delivered of a still-born child, at full time, about twenty months after the abortion. During the progress of this labor, the tumor which had protruded from the vagina, during her second pregnancy, now became a source of obstruction, having greatly enlarged and elongated. Its appearance at this time was that of *erectile tissue*, pear shaped, protruding five inches beyond the os externum, two inches in diameter, and having its pedicle somewhere within the vagina, but beyond the touch. She continued in labor some forty hours, and was finally delivered of a full grown dead child. On the eleventh day, Dr. Johns, of Wellington, was sent for, who found her suffering from suppression of urine, accompanied with general inflammation of the external genitals. The catheter was used frequently, and a general antiphlogistic treatment adopted. The difficulty of voiding urine continued several months, and the catheter had to be employed frequently. During this attack, Dr. Johns discovered a soft immovable tumor, a little to the right of the umbilicus, filling almost the entire right side of the abdomen. From this time there was pretty rapid enlargement of the abdomen, which continued to increase for the space of a year. A tumor, also, made its appearance in the right labium, and extended to the nates. It was soft and elastic, and by firm compression could be returned within the abdomen or pelvis. This tumor, protruding and enlarging, we will denominate the *tumor from the hip*. It continued steadily to enlarge, as did also the abdominal tumor. A distinct fluctuation could be felt in both. This circumstance induced the belief that it was a case of dropsy. Diuretics and hydragogue cathartics were used freely and repeatedly, but with only a mitigation of the symptoms.

About this time, she removed a distance of thirty miles from Wellington, and out of reach of her family physician. She was seen by a number of physicians of respectability, who insisted that it was a case of ascites, and that she ought to be tapped. At length, she submitted to the operation, which was performed twice by different physicians. The first punctured the abdomen in three places, without success, viz: in the linea alba, and in the linea semilunaris of each side. The second operator punctured in two places, under the confident expectation of finding fluid, but with no better success—not a drop was discharged. Some three months intervened between the operations.

Here was another case of *dry tapping*! Soon after this, she returned to her former residence, and placed herself again under Dr. Johns' care, with all the symptoms greatly aggravated. The vaginal tumor became gangrenous, and sloughed into deep ulcers. As soon as one ulcer healed, another was pro-

duced by the sloughing process. The disease was a source of intolerable suffering to the patient, as well as perplexity to the physician. In the course of nine months, the ulcers healed, under constitutional treatment, and the use of two parts pulvis rhei, and one of cinchona, applied in form of dry powder, to the affected parts.

The extensive enlargement of the abdomen and tumors, induced a most distressing state of dyspnœa. As the tumor of the hip enlarged, however, it appeared to relieve the distress of breathing, and other troublesome symptoms. For weeks previous, her sufferings were indescribable; she could scarcely breathe or live, only as she would lie upon her elbows and knees, her head in a dependent position. Anodynes were constantly used to procure rest sufficient to sustain nature. She became urgent in her desire to have the tumor of the hip opened, in the hope of finding a fluid, the discharge of which might give, at least, temporary relief.

Dr. Johns, who had always opposed tapping, yielded to her solicitations, and made a puncture, but no fluid escaped; fearing that he had not made the puncture free and deep enough, he plunged a large abscess lancet into the wound, making a deep and free incision. No fluid being discharged, he introduced a finger into the wound, but could feel nothing but a soft tissue, very much resembling the omentum. The wound was then closed by adhesive plaster, and healed kindly in a few days.

From this time the disease was allowed to take its course, her strength being sustained by constitutional treatment. The tumor of the hip continued to enlarge, and appeared to arrest the increase of size in the abdomen. Her general health gradually improved, and she again became pregnant. Under such remarkable circumstances, the labor was greatly embarrassed and retarded. Finally, resort was had to artificial means, and the labor terminated. Her recovery was more speedy than could have been anticipated, and she returned to her former condition. A period of nearly three years has elapsed, and she remains with rather an improved state of health; and presents the astonishing appearance indicated in the plate. It is proper to state that, up to the present period, her catamenia have been regular as to period and quantity, her digestive powers good, and the expression of her countenance animated and cheerful.

The case is one of an extraordinary character; and the medical gentlemen who have examined it, are by no means agreed in their diagnosis. Dr. Johns thinks it an omental tumor, and that no fluid is connected with the morbid growth. Others have supposed it ovarian disease; and those gentlemen who tapped her, were confident it was a case of ascites. Of Prof. Ackley's opinion (Dr. A. visited the patient some months ago) I am not apprised.

From the history of the case, as now presented, we conclude :

1. That the disease originated from inflammation induced from the injury received during her first pregnancy—that it was followed by organic changes, and accompanied by effusion. The precise organ or tissue in which it commenced, is not clearly ascertained; but we are inclined to the opinion that it is ovarian in character, partly solid, and connected with an enormous cyst, which lies posterior to the more solid mass.

2. That the great mass of the tumor is fluid, is indicated by the extensive and distinct fluctuation manifested upon percussion, as well as that the contents of the tumor of the hip could be returned into the cavity of the body, until the distension of the abdomen became so great as to seriously affect respiration. We are of opinion that the fluid has forced its way through the thyroid foramen, and passing under the thigh, has carried the integuments of

the nates and surrounding surface before it, thus producing the tumor of the hip.

The vaginal tumor could not be represented in the drawing, owing to its position; and we confess ourselves unable to determine, satisfactorily, its true character. We incline to think it a branch or protrusion of the more solid part of the tumor, through the vagina.

Altogether, it is a most extraordinary case; and we have been at some trouble and expense in obtaining the facts. We present the case to the profession more for its novelty than for any practical deductions that may be drawn from it.

The whole weight of the patient is two hundred and fifty-five pounds. Her greatest weight previous to marriage was ninety-three pounds. Estimating her present weight at eighty pounds, her flesh being much reduced, would leave *one hundred and seventy-five pounds* as the weight of the morbid growth. The measurements of the tumor are as follows:

Transverse diameter, from sternum to apex of posterior tumor, three feet and nine inches.

Circumference around the abdomen or long diameter, seven feet and eight inches.

Circumference of tumor of hip, in long diameter, four feet.

Circumference of neck of tumor of hip, two feet two inches.

Length of tumor of hip, two feet six inches.

Short diameter of same, eighteen inches.

Length of anterior convexity of abdomen, from ensiform cartilage to pubes, three feet and six inches.

This case presented, probably, the largest tumor on record.

CASE IX. *A fatty tumor weighing fifty-two pounds successfully removed from about the clavicle.* By L. Portalupi, Surgeon, Venice. *Annali Universali—Lancet*, 1824, vol. iii.-iv.

Towards the end of the year 1796, Signor Luigi Tedeschi, a nobleman of Verona, perceived a small movable tumor below the clavicle on the left side, precisely in the spot where he had a short time before received a wound from a French officer. This was at first considered to be a tumor of an adipose kind; some topical applications, and the use of mineral baths, were recommended; but it continued to increase in size, until it was pronounced by Professor A. Manzoni to be incapable of extirpation, without danger to the patient.

Many other eminent professors were consulted, and all concurred in opinion, that if any surgeon were hardy enough to remove it, the moment of the operation would probably be the last of the patient's existence. Alarmed at these opinions, the nobleman thought only of the means of mitigating the inconveniences of his burthen, which continued to increase, though slowly, to an enormous bulk.

In the month of July, 1816, the nobleman consulted a very eminent Professor, who gave an opinion, in writing, that any attempt to extirpate the tumor would be attended with the utmost danger, and advised the patient to abandon all idea of a radical cure. The patient, however, happening to be in Venice in May, 1820, was informed of a case of encysted steatomatous tumor, weighing thirteen medical pounds, which had been successfully removed by Signor Portalupi, at the Hospital di S. Giovanni, in November, 1814. In consequence of this information, he consulted Signor Portalupi, who differed in opinion from all the professors who had been previously consulted, and assured the patient that the tumor might be successfully extir-

pated. The principal reasons on which he founded his opinion were, first, the cause of the tumor, which had arisen from a wound, and not from any constitutional disturbance; and, secondly, that the tumor, though enormous, consisted of a mass of animal oil, formed merely by the disproportion between absorption and secretion, adherent to a limited portion of adipose tissue, and not destined to any other essential function than the union of integument with the aponeurotic substratum. The patient, though not indisposed to acquiesce in this advice, did not submit himself to the operation at that time; but, relying on other advice, he had an opening made in the tumor, and a seton inserted, which was soon after removed, in consequence of the irritation it produced. The tumor continued to increase in size, and at length became insupportable to the patient; he was unable to walk more than a few steps, and his strength was greatly reduced.

In June, 1823, three years after his first visit, Signor Portalupi was again sent for. He found the tumor presenting an enormous pyriform mass, hanging down from the left side by the clavicle, and contained in a bag formed of elongated integument. Its length from the root, taken under the clavicle, measured twenty inches and a half; the circumference, in the commencement of the pendulous portion, twenty seven inches; and the greatest inferior circumference measured thirty inches.

Signor Portalupi still maintained his original opinion that the tumor might be safely extirpated; but wished that a consultation of surgeons and physicians should be first held on the patient's case. At this consultation he stated the grounds on which he held this opinion with great ability. The following were the objections urged against the operation:—

1. Excessive hemorrhage.
2. The malignant nature of the tumor.
3. The possibility of the wound passing to a cancerous condition.
4. Immoderate supuration.

All these objections were discussed and answered with great skill and acuteness by Signor Portalupi; his argument ultimately prevailed; and he performed the operation, for the radical extirpation of the tumor, on the 26th of June, in the short space of eight minutes. The operation presented no difficulty; no bloodvessel of any size was met with, nor was any artery divided which required a ligature. The tumor weighed fifty-two medical pounds; there was no appearance of vascular tissue, nor any collection of fluid in the interior; the whole mass consisted of a quantity of soft fat towards the root, becoming gradually harder as it descended, and of stony substance at the extremity. The cure of the patient went on in the most favorable manner; the wound healed rapidly by the adhesive process, so that in ten days after the operation, notwithstanding the large surface exposed by the operation, only a limited portion of the wound remained unhealed, which was brought to a cicatrix in the course of seven weeks, the patient having, in the meantime, recovered in a great degree his former strength, and being enabled to enjoy a comfortable existence, after so many years of suffering from a disease which was supposed to be incurable.

CASE X. Removal of sixty-five tumors from the neck; subsequent death from malignant disease. By W. H. Reynale, M. D., of Dansville. Buffalo Med. Journal, 1851.

Fourteen months ago I was desired to see a son of Mr. — Murray, ten years of age, of Ossian, Alleghany county, eight miles from this place. I found the boy small of stature, very pale, with a large tumor on the left side of the neck. He looked like a child with two heads, only the tumor was the largest.

It occupied the whole space from the root of the ear to the acromion process of the scapula; filled up everything from the spinous processes of the cervical vertebræ to the clavicle, and ran from the ear along the lower side of the cheek and jaw bone, to beyond the trachea on the opposite side of the neck; so that in fact it filled up and occupied a little more than the entire space on the left side of the neck, and threw the head on the opposite shoulder. I removed the entire mass, with the assistance of Doctors Endress and Patchin; we took out sixty-five distinct tumors, attached together by areolar substance, from the size of a goose's egg, and larger, down to that of a marrow-fat pea; they were of a fatty substance, I think. They filled a half-gallon jar after their removal. The patient recovered so as to enjoy tolerably good health for eight months, when a number of small tubercles began to form around the margin of the old extirpated tumor; most were on the shoulder, some near the ear, and a few near the clavicle and spine; all were on the circumference, and none on the cicatrix. He soon after this began to complain of pain in the left side, just below and beneath the false ribs. His father brought him to my house; upon examination I found a tumor of large size under and coming out from beneath the ribs, and quite painful to the touch. I told the father I could do nothing for his son, the disease was of a malignant nature, and that he would die. He lived twelve months from the time of the operation, and died. His father sent me word at the time of his death, according to agreement; but in consequence of my being from home at the time, I did not get the information, and no post-mortem examination was made, which I much regretted.

* * * * *

After the *entire mass, externally, was removed*, we discovered that a tumor of the size of a black walnut was lying under the clavicle; this we removed without much difficulty; then another was discovered lower down, of about the same size; this I seized with two tenacula, one in each extremity of the tumor; an assistant held them firmly and made a little pressure upwards, when, partly by dissecting, and partly with the handle of the scalpel, and partly with my fingers, I succeeded in extracting this also; but still there was another one of the same magnitude, lying yet deeper and beneath the last one—this laid below the second rib; it was also seized with two tenacula, and firmly held by an assistant, until partly by the handle of the knife, but mostly with my fingers, and a very little dissection with the knife when it could not possibly be avoided, I succeeded in getting *it all out*—no more could be felt. It is unnecessary to describe the situation of the patient from day to day during his convalescence; for the first few days he vacillated between hope and fear, but the powers of nature came to our assistance, and the patient recovered so far as to enjoy tolerably good health for eight months; ate, and slept well, the countenance improved, and he looked better than he had for two years before the operation. The head resumed its natural position, and the rotary motion was good. The patient went to school some two or three months during this time. This enormous mass was only two years in growing; when it was first discovered it was of the size of a filbert, or smaller, and situated directly at the root of the ear. Mr. Murray says many applications were used to discuss the tumor, but they all (he thinks) hastened its growth.

The operation was performed while the patient was under chloroform.

CASE XI. *Extraordinarily large steatomatous tumors; successful removal of the largest.* Revue Médicale—Phil. Journ. Med. and Phys. Sci., 1822, vol. v.

M. Dagorn, of Morlaix, has described an extraordinary case of steatoma-

tous tumors arising from the trunk, the largest of which weighed forty-six pounds. The patient was a female, aged eighteen years and a half. No cause could be assigned. The largest of these tumors, which covered nearly the whole of her body, made its appearance in 1820, unattended with pain: the seven others appeared successively until 1817. The patient had been attended by several physicians, but without success.

Description of the Tumors.—Emilie Sève, the subject of this disease, weighed one hundred and sixty-seven pounds, although somewhat lean, and of ordinary stature. The posterior surface of the trunk towards the cervical region presented two tumors, eight inches long, and three broad, uneven, and covered with small whitish spots. A third, very small, round, and soft, was situated at the posterior edge of the right arm, near the arm-pit. The fourth, which arose from beneath the inferior angle of the right scapula, was one foot three inches long, and six broad. The fifth was beneath the insertion of the preceding, and was six inches long and five broad. The sixth was larger than a man's head, and was situated at the external part of the right hip-bone. The seventh was smaller, and seated above the trochanter of the same side. Finally, the eighth had its origin at the left hypochondrium, and reached down as low as the calf of the leg, being two feet long, and three feet one inch around its base. All these tumors were of the steatomatous kind, soft, uneven, of a loose areolar tissue, and entirely isolated from the internal organs and muscles. From all the circumstances of the case, M. Dagorn inferred that the disease was not dependent upon any particular *vice*; that it was confined to the integuments and areolar tissue; and that amputation of these tumors was practicable and advisable. The operation was therefore resolved upon, and performed by M. Dagorn on the 20th of July, 1819, in the presence of several physicians. The largest tumor was removed by making two flaps, and from the extent of the wound and the flaccid state of the skin, the twisted suture was required. The tumor weighed forty-six pounds. The integuments were very thin, and the cells of the areolar tissue much dilated, and filled with a diaphanous, serous fluid, mixed with yellowish, fatty flakes. From the summit to the base of the tumor the trunks of an artery and vein were visible, which ramified over the surface and into the substance of the mass.

The cicatrization of the wound took place at the end of two months and six days; after which, the other tumors, which had remained stationary, increased considerably.

Remarks on scrotal elephantiasis. By J. M. Titley. M. D., of Euston Grove. *Lancet*, 1831, vol. xx.

The profession is already aware that the responsibility of an operation of the kind was first incurred by me; that in the year 1813 I removed from a negro in the island of St. Kitts, a tumor half as large again as that of Hoo Loo, weighing 70 lbs.; that at subsequent periods I performed five similar operations, all with perfect success; that I assisted in four other cases, where the tumors weighed about 50 lbs. each, one only of which was fatal; and that I have recorded another attempt, at which I was not present, where the patient died from exhaustion after an operation lasting eight hours, the tumor weighing 156 lbs. The profession is also aware that a like tumor of 45 lbs. weight was removed by Mr. Liston, of Edinburgh, another by Dr. Wells, of Maracaibo, and a third by M. Delpech, all with success.

CASE XII. *Successful excision of a large elephantiasis scroti.* By Dr. Seerig, of Königsberg. *Lancet*, 1836, vol. xxxi.

The subject of the case now before us was a strong-built man, 34 years of age, born at Kreidelwitz. His parents enjoyed good health. Up to the age of eight years, the patient merely suffered from some of the exanthematous diseases common in childhood. At eight years one of the glands of the right inguinal region began to swell, and being treated with poultices, broke, but healed after a lapse of six months. Five years after this, he began to perceive a tumor over the symphysis pubis, which soon attained the size of a hen's egg; it increased gradually, extended over the skin of the penis, and at the age of ten years, extended so far down along the scrotum as to be taken for a hernia. It attracted no attention until it had reached the size of a double fist, and began to cause pain in the part. The patient now sought medical aid, and, when twenty years of age, came to Breslau, and was there treated (during a space of three months) as one affected with scrofula, with mercurials and antimonials, but without any effect. Four years later, a large glandular swelling formed under the angle of the right jaw, which the patient himself opened and healed. The tumor of the scrotum continued to make rapid progress, and as it was soft and painful, the patient decided on operating on himself, and for this purpose made an extensive incision, with a razor, into the tumor, and gave issue to several quarts of purulent fluid, mixed with blood and serum. The incision soon closed up, and the tumor resumed its progress. The general health of the patient continued all this time unchanged. The penis was completely hidden in the tumor, and for the last ten years the urine was discharged from an opening in the middle.

At this period, the man came again to Breslau, when he was seen by the author, who gives the following description of the tumor: The fleshy mass, extending from the symphysis pubis to the knees, embraced the whole of the penis and the scrotum, and presented a threefold division. In the middle of the tumor, about seven inches below the symphysis pubis, there appeared a kind of irregular tube, of a thick, spiral form, four inches long, and penetrated with an opening at the end, which at first sight might be taken for the penis, but was soon found to be the prepuce, from which the urine flowed when the patient made water. The large circumference of the tumor measured three feet; the distance from the anus to the symphysis pubis, two feet five inches; the circumference of the root, one foot eight inches; the thickness of the broadest part, fourteen inches; that of the root, six inches; and the antero-posterior diameter, one foot. The skin covering this mass presented a diversified appearance. On both sides it was of a blue-red; anteriorly, grayish; fluctuation could be nowhere felt. It was also impossible to distinguish the penis or testicles. The skin covering the under and broad part of the tumor was excessively thick, cracked, and covered with the scaly incrustations seen in elephantiasis. The diagnosis of the disease was not difficult. It could only be considered as *sarcoma scroti et præputii*, or, rather, *elephantiasis* of the same parts.

The patient having consented to an operation, and being placed in a convenient posture, an incision was made with a large convex bistoury, extending four inches on the left side, from the abdominal ring downwards. This enabled the surgeon to expose and separate the left testicle. The right one was exposed in a similar manner. Both testicles were easily found, but the hemorrhage was very profuse, and several vessels were tied. The two incisions just mentioned were now united with a transverse one, in order to save a flap for the penis. The latter part was separated from the surrounding substance, and the operation terminated by two curved incisions, which, commencing

from the lower ends of the perpendicular incisions, met one another posteriorly, and thus formed an artificial serotum. The operation was frequently interrupted by the necessity of tying the large venous and arterial trunks, which were opened, but at length a proper flap was shaped out for the penis, and the edges united with several points of suture and strips of sticking-plaster. The dressings, composed of compresses, bandages, etc. were now applied, and the whole operation terminated in forty minutes. The patient bore it well, and was carried to bed in excellent spirits. The tumor, even after the discharge of an immense quantity of serous fluid, weighed 27 pounds; the integument covering it was very thick, and similar to that in elephantiasis. The areolar tissue under the skin was one inch deep, contained a yellowish-white serum, and was crowded with bloodvessels.

A few hours after the operation, the man found himself sufficiently well, and was able to pass water freely. The febrile symptoms were not very severe, and disappeared on the fifth day after the operation.

The dressings were changed on the third day; the pain was slight, the discharge of pus moderate, and several of the stitches came away on the seventh day. The patient slept and ate well up to the tenth day; however, he was much teased with frequent cough, for which he took extract. hyoseyam. in aqua amygd. amar; and, afterwards, the sulphur. silicat. aurant., with extract of hyoseyamus. On the 19th day, the different points of suture had come away, and the cough then disappeared.

Several days now passed over without any accident, when he was seized with very profuse debilitating sweats, which, however, were subdued in about eight days, by the mineral acids. Cicatrization of the wound was nearly complete, when, without any appreciable cause, the patient fell into a most unfavorable state of mental depression, and lost both appetite and sleep. This state, however, yielded to a general bloodletting, and he was able to leave the hospital, fully cured, 35 days after the operation.

CASE XIII. *Fatal case of excision of an enormous scrotal tumor.* By H. H. Goodeve, M. D., Prof. in the Calcutta Med. College. Calcutta Med. Quarterly—Lancet, 1838, vol. xxxiv.

Golaum Hyder, ætat. 45, applied at the Medical College on the 6th of April for relief from an enormous tumor of the scrotum. He stated that his general health was good in every respect. His countenance was fresh and lively, his pulse natural, appetite good. He said that the tumor had commenced about seven years previously, by an increase in the size of the scrotum and a thickening of the skin which covered it. This enlargement had gradually augmented, involving in its progress the prepuce, and finally, about a twelvemonth since, completely hiding the penis from view. The tumor was still increasing.

From the lower part of the abdomen, and from between the thighs, hung down as low as the ankles an enormous mass of flesh, of a rounded form, with a comparatively narrow neck. No sign of the generative organs could be observed in this tumor, but a large depression about the centre of its anterior surface marked the termination of what once had been the prepuce, and gave passage to the urine. On the neck of the swelling a careful examination enabled us to trace the cord on either side, but neither penis nor testicles could anywhere be felt. The skin of the neck and upper part of the tumor was smooth and healthy, but the rest was thick, rugous, and tuberculated. The dimensions of this large mass were as follows: Greatest diameter, three feet nine inches; length from pubes downwards, twenty-one inches; circumference of neck, eighteen inches.

The operation was performed on the 19th of April, at half-past 7 A. M. In attempting to remove the diseased growth, it was resolved to save the organs of generation, if practicable, and I determined to commence the operation by clearing these from the surrounding mass, and then to cut away the remainder as rapidly as possible.

A long director was first introduced into the opening in the front of the tumor, and pushed up for about eight inches as far as the penis. I had originally intended to slit up this canal, and I regret that my wish was overruled, because I think it delayed the operation, for I should at once have found the extremity of the penis, and have had a free opening to work in. Instead of this, I cut down upon the end of the director, with a cross-cut about four inches in length. The instrument lay very deep, probably three inches below the skin. This incision formed a well that instantly filled with blood, the continual flow of which for a short time impeded any further progress in the operation, for I did not dare to cut deeper where I could not see, lest I should wound the glans penis. The bleeding was merely venous, however, and soon stopped. I then made an incision joining the first nearly at right angles in the direction of the spermatic cord, upon the left side, extending down upon the front of the tumor. In the bottom of this wound I expected to find the testicle, but after cutting for the depth of four or five inches, I came to the bag of an enormous hydrocele, containing certainly not less than five or six pints of fluid. Dividing this lengthwise, and discharging its contents, I found the testicle at the most depending portion of the sac—indeed, very nearly at the bottom of the tumor itself; the spermatic cord could not have been less than 16 or 18 inches in length. It was determined to remove the gland as a useless body; the spermatic cord was accordingly compressed between the fingers of an assistant, and divided. Scarcely any bleeding followed this division when the pressure was removed. An incision similar to that on the left side was then made in the direction of the right spermatic cord, which was readily found, and traced downwards to the testicle. Another, but a smaller hydrocele, filled the tunica vaginalis in that quarter. This was emptied, and the testicle and cord separated from the surrounding parts. The penis was then completely cleared, and, with the testicle, was held up towards the abdomen, whilst the remainder of the tumor was removed—a part of the operation very readily accomplished. A long Liston's catling was driven through from the front of the wound below the penis backwards to the perineum, and with one cut brought out so as to leave a flap of healthy skin on the left side. A similar cut upon the right separated the mass from the body, and left a large gaping wound between the thighs, which, however, together with the body of the penis, was readily covered with the flaps left by the concluding incision. The divided spermatic artery was tied as a precautionary measure. The edges of the wound were then closed with five or six ligatures, and water dressing was applied. The whole operation lasted but 14 minutes, and there may have been between 30 and 40 ounces of blood lost; this was almost entirely venous, and flowed within the first minute or two of the operation. Subsequently, there was no bleeding whatever; the diseased structure did not appear to contain a drop of sanguineous fluid—indeed it possessed altogether a very low degree of vitality. The patient was very faint once or twice during the operation, but he revived by the administration of some brandy and laudanum, and the application of hot water to his epigastrium; so that, after it was all over, he was warm; his pulse beat pretty freely; he talked rationally, and appeared very thankful that he was relieved from the disease. For two or three hours he continued tranquil, and expressed himself to be very comfortable, except that the wound *burned* a good deal, as he

expressed it. He vomited once; complained occasionally of thirst, and it was necessary to give him a little ammonia from time to time. At 11 o'clock his pulse was beating freely; he was warm and apparently doing well. But in half an hour afterwards a slight convulsive fit occurred; he grew faint, and gradually sank till half-past 12, when he expired.

The tumor, upon examination, was found to weigh fifty-six pounds, exclusive of the water contained in the hydrocele, which must have been five or six more. Its structure resembled that of all other tumors of the elephantiasis variety which I have met with. It consisted of layers of tough fibro-cellular texture, with deposits partly of gelatinous matter, partly of a glairy fluid within the denser substance. The dermis and the tumor seemed insensibly to blend into each other. In the centre of the mass were the remains of the two empty bags of the hydroceles with the left testicle.

CASE XIV. *Elephantiasis of the scrotum, weighing fifty pounds, successfully extirpated.* By M. Clot-Bey. Laneet, 1833, vol. xxv.

Ali Mahmet, gardener, forty years of age, living for the last twelve years at Alexandria, tall in stature, and of strong constitution, was received into the General Hospital on the 15th of July, 1833, with a tumor of the serotum, which presented the following characters: The form of the tumor was oblong and spheroidal, with a broadish base, measuring in circumference forty-four inches from top to bottom, and thirty-nine inches from before backwards; the estimated weight being from forty-five to fifty pounds. The tint of the skin was of an obscure dark-gray brown, altogether characteristic of the disease; here and there some globular granulations varying in size from a small pea to a nut seemed to sprout from its surface; an excoaration on the left side of the raphé of the serotum gave issue to a small quantity of a colorless and inodorous serum; the tumor was not sensible when pressed lightly, but if the pressure were gradually increased it became intolerable; the patient generally feels a slight sensation of pain, which is continued, but is very feeble. The sound of the tumor is dull on percussion; there is no ballottement or resonance; only a slight shock is transmitted through the swelling, which, joined to the external uniformity of appearance, made it extremely probable that the tumor was of the same nature as those formerly extirpated by M. Clot-Bey. When the growth of the tumor had reached two years, its size was about double that of the serotum, and up to the twentieth year of the patient's life the progress was progressive, at which time it was fully as large as a young child's head. During the four years which followed the last period indicated, there were alternations of erosion and discharge of serosity, with suppression of the discharge, constantly in the spot before mentioned, which the patient seemed inclined to regard as the point primitively affected. During the fifteen or eighteen years following, its increase was proportionately more rapid; and as the tumor advanced it brought forwards with it the integuments of the penis, which was at length completely removed from view, leaving no trace of it except a small linear opening; however, by compressing the tumor, and pushing backwards the pubic portion of its covering, the patient could expose the glans penis to the extent of an inch and a half; by this means he was still able to copulate, and had several healthy children by his first and second wives. In the state now described, Ali Mahmet, by the advice of M. Clot-Bey, came into the hospital on the 16th of July, to undergo an operation; he was put on an appropriate regimen, and the tumor was removed on the 31st of the same month, in the presence of the principal hospital surgeons of Alexandria. M. Clot announced his intention of operating in a manner totally different from that hitherto used by him. The patient

was placed in a position as for the high operation for stone; two lateral incisions, about six inches long, parallel, and distant from each other five inches, were first made, and then united at right angles by a third incision, stretching horizontally below the orifice through which the urine flowed; by this means that portion of the prepuce extending from the base of the glans to the extremity of the anormal orifice, was preserved for the length of an inch and a half, and turned back upon the penis. The flap was now dissected off from the penis, and turned away towards the pubes, after having been separated above from the prepuce by a transverse incision; the glans, prepuce, corpora cavernosa, and canal of the urethra, were now exposed in turn rapidly, and the operator proceeded to seek for and lay bare the spermatic cords and testicles. For this object two lateral incisions were made to circumscribe two similar flaps, extending from the superior angles of the first flap to the perineum; the spermatic cords were found very deeply situated in the tumor, from which they were separated with great difficulty. The two testicles were also found deeply placed, but healthy; they were likewise dissected away, and held up against the pubes by the hand of an assistant. As there was now no longer any danger of injuring essential parts, the operator proceeded to cut more boldly, and with a few more strokes of the knife removed the whole tumor, taking care to leave the elliptical flaps as envelopes for the testicles. No ligatures were necessary during the course of the operation, and only one was applied to a branch of the pudic artery after it was completed. The two testicles were now covered by the lateral flaps, which were united by several points of suture. The operation lasted about twenty minutes; the weight of the mass removed was fifty pounds; its structure was lardaceous in some parts, very loose in others, and infiltrated with serum. The whole surface of the wound was carefully surrounded by lint, sustained by compresses and a T bandage, and the patient removed to bed. He was in a depressed state after the operation, but the pulse was calm. At eleven o'clock he had some vomiting, throwing up, however, only the anodyne draught given him during the operation. At four o'clock he says he feels well, but the pulse is a little feeble.

Aug. 1. Fever, but passed a quiet night; tongue moist, a little red; in the evening the same state, perhaps fever a little less. Tartarie lemonade.

2d. Quiet night; pulse calm, but frequent; the dressings are taken off; one suture has given way, and a small gangrenous eschar formed at this point; the suppuration is abundant, and the pubic region is very warm and *ballonnée*; the patient has not had a stool for four days. Cataplasms to the hypogastric region; laxative elyster.

3d. He has had a copious stool, and passed a quiet night; the eschar has been thrown off without enlarging; the suppuration still continues abundant, but some adhesions have taken place between the edges of the wound.

4th. One stool; has passed an excellent night; the pus is of a better kind than before, and the wound is cleaning; the greater part of the sutures came away yesterday evening.

5th. Same state; the wound is quite clean, and of a good red color; the volume of the serotum much diminished, and the wound is much contracted. From the 5th to the 10th the wound continued to heal rapidly; no further inflammation, except that necessary to adhesion, has set in, and the patient may now be regarded as perfectly cured.

CASE XV. *Elephantiasis of the prepuce and scrotum, weighing sixty pounds, successfully extirpated.* By the late Prof. Delpech, of Montpellier. *Lancet*, 1830, vol. xvii.

A soldier, who up to his 25th year had been in the enjoyment of perfect health, became at that period affected with an ulcer on the prepuce, which was treated by cautery and mercurial frictions; but from the patient's neglecting himself, and being obliged to continue his duty on horseback, it violently inflamed; the prepuce and scrotum swelled enormously, and the skin became of a brown color, fissured, very hard, and covered with tubercles, as in elephantiasis. Seven years after the commencement of the disease, the skin and subcutaneous tissue of the penis and scrotum had degenerated into a tumor of such an enormous size, as to descend below the ham; it was free from pain, of a trilobular pyriform shape, the smallest part being eighteen inches in circumference. The opening of the urethra was almost entirely covered by the degenerated prepuce, and at the lower portion of the tumor, could still be distinguished as a sort of furrow. The patient assured M. Delpech, that he sometimes had the sensation of erection and even of ejaculation, and that on pressure at the side of the tumor, he distinctly felt as if the testicles were pressed. On repeated examination, however, no trace of the penis or testicles could be felt in the mass of the tumor. The patient's general health being undisturbed, M. Delpech decided upon extirpating the tumor. Two semicircular incisions having been made on the tumor from the abdominal ring of each side, and meeting towards the anus, and two others nearly parallel with them, and four inches lower, their posterior extremities were connected by a longitudinal perpendicular incision, so that there were three flaps formed, two smaller posteriorly and laterally, and one larger and anteriorly and in the middle; the testicles, penis, and spermatic cords, presenting themselves in a state of perfect health, were, with extreme caution, isolated from the mass of the tumor, which was eventually removed; its weight was fifty-four pounds, besides about six pints of infiltrated serum which had escaped during the operation. The testicles and spermatic cords, which were considerably elongated, were covered with the lateral flaps, and the penis with that comprised between the two lateral sections, and the wounds closed by sutures. The whole operation lasted only fifty-seven minutes. The wounds completely healed, with the exception of a small portion of the median flap, which became gangrenous. About twelve weeks after the operation, the patient was perfectly well. The difference between the artificial scrotum and covering of the penis, and these parts in a natural state, was but very slight. Six months after the operation, however, the patient died after a very short illness, apparently in consequence of intemperance in wine. On the post-mortem examination, an abscess in the liver was found, which had not been suspected during his stay at the hospital.

CASE XVI. *Removal of a tumor weighing fifty-six pounds, involving the penis, scrotum, &c.; death.* By Aston Key, Esq., Surgeon to Guy's Hospital. *Lancet*, 1830, vol. xx.

Hoo Loo, a Chinese laborer, was admitted into Luke's ward, Guy's Hospital, in the third week of March last, with an extraordinary tumor depending from the lower part of the abdomen, and of a nature and extent hitherto unseen in this country. He had been brought to England from Canton, by his own desire, in an East Indiaman, for the purpose of having this tumor removed at one of the London hospitals, the native surgeons declining to make the attempt, a general disinclination to the performance of serious operations

prevailing in the East, where both the climate and the law offer important objections to surgical proceedings which may lead to the loss of human life. The case excited considerable interest, both in and out of the profession, from the first moment of his arrival, and he was visited in the hospital by a great number of persons of all ranks.

We have heard that on his voyage here the change of air had such an effect on his constitution, as to occasion a material increase in the tumor. Since his arrival his appetite, health, and spirits, were extremely good. While in the hospital there appeared nothing to induce the surgeon to order him any medicine. His diet consisted principally of boiled rice, and no restraint was placed on his appetite, which was very great. He was generally considered to have improved in health while in the hospital, though it was difficult to form a decided estimate on this point. He all along contemplated the operation with satisfaction.

It was generally understood that the operation would be performed on Tuesday last, but so great a crowd of spectators was apprehended that Saturday, which is a *dies non* in the hospital, was fixed on instead. Notwithstanding this precaution, however, an assemblage, unprecedented in numbers on such an occasion, presented themselves for admission at the operating theatre, which was instantly filled in every part, although none but pupils, and of those only such as could at the moment present their "hospital tickets," were admitted. Hundreds of gentlemen were consequently excluded, and it became obvious to the officers of the hospital, that some other room must be selected. Accordingly, Sir Astley Cooper entered, and, addressing the pupils, said, that in consequence of the crowd, the patient being in a state which would admit of the removal, the operation would take place in the great anatomical theatre. A tremendous rush to that theatre accordingly took place, where accommodation was afforded to 680 persons, and where preparations were immediately made for the patient. In about a quarter of an hour, Hoo Loo entered, accompanied by two nurses and a *posse comitatus*, consisting of various functionaries of the hospital, and in the course of a few minutes he was secured on the operating table. A short consultation now took place between Sir Astley Cooper, Mr. Key, and Mr. Callaway, during which it was finally agreed, that if it were found possible, the genital organs should be preserved. The face of the patient was then covered, and Mr. Key, taking his station in front of the tumor, commenced the operation. His object, apparently, was to make three flaps, of such a form and extent as would cover the penis and the testes when they should be relieved from the tumor. The first flap was made on the anterior part of the tumor; the others on either side. The former of these would have covered the penis, and the two others (which were made semilunar in figure with the convexities looking outwards) would have accomplished the purpose, when united, of enveloping the testes, and at the same time of forming the integument of the perineum. The first incision was commenced on the right side, just under the abdominal ring, and being carried obliquely inwards for about an inch, was continued so as to form the semilunar cut, from the lowermost point of which the knife was again carried inwards, in order, apparently, to leave such a small projection of integument as, with a corresponding piece on the opposite side, might serve to go round the root of the penis. This portion having been reserved, the incision was continued onwards for about four inches in a straight line, and was then turned at a right angle, parallel with the operator, forming a line of about two and a half inches in length. A similar cut was then made on the left side, and connected with that on the right by the parallel or transverse cut. The flap thus formed was now dis-

sected from the tumor and laid back upon the abdomen. The operator then proceeded to lay bare the two cords and the penis, a step in the operation which was performed with very great neatness. Sufficient time had now elapsed for the depressing effects of the operation to exhibit themselves, while the penis and testicles had yet to be dissected out. The determination to attempt this arose from its having been ascertained that the sexual inclinations of the man were unimpaired, seminal emissions being occasionally experienced. The delay, however, which so intricate a portion of the operation would have occasioned, now induced Sir Astley Cooper to propose that the genital organs should be sacrificed, and the suggestion was promptly acceded to. A temporary ligature was accordingly passed round each of the cords and the penis, and these being divided, the remainder of the operation was pursued solely with a view to the removal of the whole mass. But a period of time elapsed before the conclusion of the operation which must have far exceeded the anticipations even of the most fearful, and by the time the tumor was entirely separated and the exposed parts were closed over, an hour and forty-four minutes had passed. This tremendous protraction was chiefly occasioned by the intervals which were from time to time allowed the patient for recovery from the fits of exhaustion which supervened. Complete syncope occurred twice, and during the whole of the latter steps of the operation he was in a state of fainting. The quantity of blood lost was variously estimated by those who assisted, and though certainly not large, it was the operator's own impression that the hemorrhage was the immediate cause of death. It would probably be correct to state the loss at twenty-five ounces, although as few as fourteen and as many as thirty were named. Of this quantity not more, we should think, than a single ounce was arterial: all the ligatures were quickly applied, and with great dexterity. The number of large veins divided was immense, but only three small arteries, besides the two spermatic, were taken up. Immediately after the removal of the tumor, another fit of syncope—if syncope could be said to be at all incomplete for the last half hour—came on, from which the poor fellow did not for a moment rally. No remedies that were directed to overcome this state of collapse had the slightest effect; warmth and friction of the extremities, warmth to the *scrobiculus cordis*, the injection of brandy and water into the stomach, and, ultimately, from the suspicion that the loss of blood had been too great, transfusion to the amount of six ounces, taken from the arm of a student—one amongst several who offered to afford blood—were amongst the means resorted to. The heart's action gradually and perceptibly sank. The patient did breathe after the operation, but that is as much as can be said. Artificial respiration was subsequently but vainly attempted.

The fortitude with which this great operation was approached, and throughout undergone, by Hoo Loo, was, if not unexampled, at all events never exceeded in the annals of surgery. A groan now and then escaped him, and now and then a slight exclamation, and we thought we could trace in his tones a plaintive acknowledgment of the hopelessness of his case. Expressions of regret, too, that he had not rather borne with his affliction than suffered the operation, seemed softly but rapidly to vibrate from his lips as he closed his eyes, firmly set his teeth, and resignedly strung every nerve in obedience to the determination with which he had first submitted himself to the knife.

His character was naturally exceedingly amiable. When occupied in thought, his features assumed an appearance of slight melancholy, but at other times a very cheerful and good-tempered expression of countenance prevailed. The appearance of the features after death was very characteris-

tic of this. Whenever an exhibition of the tumor was desired, he was displeased and somewhat reluctant, seeming to imply by his language, that it was of "no use" to show it. With the nurses he had become a great favorite, and his death elicited the utmost commiseration, perhaps a few tears, in the ward which he inhabited.

Iloo Loo was 32 years of age, and the tumor had been ten years in arriving at its present growth. Its effect upon his frame, and the muscles of the abdomen, was not particularly oppressive. It of course occasioned a very great strain upon the fore part of the body, and to preserve his balance he was compelled to throw the shoulders backwards, and assume the gait of an alderman whose belly preponderates and displaces his centre of gravity. The weight of the tumor was conjectured to be about seventy pounds, but when placed in the scales after its removal it weighed but fifty-six. His strength was not affected by it. He could take a stout lad in his arms and toss him with ease.

The tumor commenced in the prepuce; the cause of it is involved in obscurity; nothing could be gathered from the patient to lead to the supposition that it was the effect of a blow, or to justify its being ascribed to any one particular exciting cause. Its form inclined to that of a flattened spheroid. When removed, and resting either upon its upper surfaces or its base, it sank and spread until its mean depth was about six inches. The neck or peduncle by which it was attached was of a triangular form; the upper and anterior side of the neck was parallel with the os pubis, extending on each side of the external abdominal ring about two inches and a half, its other sides occupying the lateral boundaries of the perineum, and meeting in an acute angle immediately before the anus. Although the disease commenced in the prepuce, that portion of the tumor, or an elongation of it, was preserved in an isolated state from the rest of the growth, although of course totally disfigured, and presenting far greater appearance of disease than other parts of the integument. It now hung at the lowermost portion of the tumor, forming a second tumor, presenting an orifice for the discharge of the urine, varying in its transverse diameters from one to three inches. The passage to the urethra was, as far as the finger could reach, smooth and hardened; externally it was a mass of tubercles, which spread on each side over the surrounding portion of the tumor, presenting for a considerable distance a hard and thickened cutis, studded with elevations. The sides and posterior part of the body of the tumor, as well as the whole of the peduncle, were of a perfectly healthy and natural appearance. The circumference of the mass was four feet, that of the neck two feet, each side of the neck, which was about equilateral, measuring eight inches. When the patient stood upright the lower part of the tumor reached considerably below the knees.

It may be mentioned, that the urine also found a vent externally by an opening situated on the surface of the tumor immediately at the base of the preputial tumor, which latter, as it had a strong tendency to overlap on the side of the opening, hid the false passage, if it may be so called, from sight.

Post-mortem examination.—The examination of the body took place on Thursday morning.

From the tumor itself a certain quantity of fluid (not large) escaped during the operation; the solid mass weighed fifty-six pounds, as we have already mentioned. It was decidedly steatomatous; but the examination has not yet been completed. About an inch of the penis was laid bare by the dissection.

There were no appearances which arrested the attention on the examination of the body. The *stomach* and other viscera were perfectly healthy. The cremaster muscles were both much increased, apparently from an enlargement of the fibres, and not from any multiplication of them. The state of the wound was not at all unnatural; but, some of the veins which came from the tumor were as large as the little finger. The arteries of the cord were not larger than usual.

CASE XVII. *Elephantiasis scroti weighing over seventy pounds, excised; patient died in four hours.* By Dr. Child. London Med. Gazette—Ranking's Abstract, 1850.

In the summer of 1849, a man from the eastern part of the Delta, suffering from enormous enlargement of the scrotum, was received into the Pasha's Military Hospital at Alexandria, under the care of Alex. Farquhar, Esq. The tumor had begun four years previously; before which time, however, he had twice undergone an operation for the radical cure of hydrocele. The patient's age was 28, and his general conformation was robust. The tumor was pyriform in shape, and of the ordinary color of the scrotum. It reached about half way down the legs, and almost entirely prevented him from walking. When the patient was seated, with the tumor resting on a couch, a line drawn round it from one side of the pubes to the other measured four feet three inches; and, from its attachment at the symphysis pubis round to the anus, it measured three feet three inches; its circumference at its greatest diameter was three feet eight inches. The tumor was firm, but of variable consistence throughout.

Mr. Farquhar proposed the removal of the tumor; to which the man, worn out with its weight, and other inconveniences, readily consented. With reference to the operation, it may be mentioned that it lasted twenty-five minutes. The first incisions through the integuments were attended with bleeding from numerous small arteries and veins, none of which required tying. The substance of the tumor itself did not contain any vessels of large size. The penis and the testes were carefully guarded from injury. It was found that hydrocele existed on both sides; each tunica vaginalis containing about two pints of serous fluid.

Previous to the operation, Mr. Farquhar determined, in consultation with Bedan Bey and his other colleagues, to administer chloroform. Accordingly, it was given freely during the operation, with the effect of producing total insensibility to the pain. On beginning to dress the wound, however, it was found necessary to administer stimulants abundantly, on account of the prostration of the patient; and although these were assiduously repeated after his removal to bed, he never rallied, and he finally sank, four hours after the operation.

The chief substance of the tumor was found to be composed of the hypertrophied integuments and condensed areolar tissue; it weighed seventy pounds after the fluid of the hydroceles had drained from it.

A *post-mortem inspection* was made three hours after death. The chief morbid appearances were a small cyst near the lower end of the œsophagus containing about an ounce of dark-brown grumous fluid, and an abundance of yellow, peculiar looking fat, pervading the areolar tissue generally, and likewise attached in masses to many of the abdominal viscera. It was found also in the pelvis and substance of the kidneys, and abundantly in the anterior mediastinum. The heart was healthy; and it is to be remarked that its texture was unusually firm.

With reference to the chloroform question, it will be asked, had the chloro-

form any influence in this case in bringing about the fatal prostration of the patient? This is a point which will probably be decided by each person in accordance with the views which previous experience or reading may have led him to entertain. Many, no doubt, will look upon it as one case more added to the list of those showing the pernicious effects of chloroform; another class, probably the majority, will consider that nothing is here proved against the use of that remedy. At all events, this is not the first instance where a patient has sunk from the shock of this operation, and that at a time when chloroform was unknown. The operator's own conviction is that the effect of the chloroform was most injurious.

CASE XVIII. *Successful excision of a scrotal tumor weighing one hundred and ten pounds.* By M. Clot, late Inspector, &c. of the Egyptian Army, Med. Department. *Lancet*, 1831, vol. xx.

Having been at Alexandria towards the end of the month of March, 1830, my attention was attracted by an unfortunate Arab, who was affected with an enormous scrotal tumor, by the exposure of which he endeavored to excite public compassion. Perceiving the possibility of relieving him by a surgical operation, I had him received into the Naval Hospital on the 27th of March, and by careful interrogation received the following information concerning his general history, and the origin and progress of his case.

Agi Assan, æt. 40, was born at Benilkelp, in the environs of Montfalout, Upper Egypt, of strong constitution, and lively disposition. His mother labored under elephantiasis of the legs. His only trade was that of a marabout, a description of servant in the Moslem sanctuary, an office hereditary in his family. He led a wandering life, begging and selling amulets through Egypt.

He states that, at twenty-five years of age, a swelling of the scrotum supervened spontaneously, and without known cause. He had been attacked several times previously with venereal affections, for which he received no medical treatment, as is the usual custom with the Arabs, in whom syphilitic symptoms frequently disappear without medical interference. The swelling at first was painful, but then became indolent, and increased very slowly; now and then, however, assuming an acute character, accompanied with fever and vomiting. This state usually lasted a few days, and at each accession the size of the tumor became increased. In the lapse of fifteen years it attained nearly the size of a fetus at the full time. During this period he had two children. After that the disease made much more rapid progress, and in the space of the twelve ensuing years (up to the present time) the swelling acquired the development which I proceed to describe:—

The form and volume of the tumor were so singular, that it seemed as if Agi Assan had placed a large wine bag between his thighs. No traces of the genital organs were perceptible to sight or touch; the weight of the swelling obliged him to remain constantly seated on the ground. When standing up he was necessitated to keep his limbs widely separated, and in this position the tumor could be moved neither forwards nor backwards; it touched the ground, and the patient could sit on it as if on a chair, but this attitude could not be long preserved. It was twenty-three inches long, its transverse diameter nineteen, and its antero-posterior depth ten inches. Its anterior surface was divided nearly in the centre by two deep and oblique furrows, by which the tumor was apparently separated into two distinct parts. The skin covering the superior portion was of a dark-gray color, marked also with deep oblique furrows, leaving in their intervening spaces ragged swellings of various forms. The inferior part was rounded and more volu-

minous, its skin smoother, its tint of a clear gray, and exhibiting in its centre a longitudinal furrow, apparently indicating the course of the raphé. In the centre of this second portion there was a projecting ridge, two inches long by one wide, on the left of which was situated the orifice through which the urine was discharged. To the right were some ulcerated spots, and here only was pain experienced. The posterior surface was of darker color, the skin hard and resisting, and inferior in sensibility and heat to the rest of the surface of the body.

The tumor was fixed to the pubes and perineum by a large isthmus nearly two feet in circumference, formed by the skin of the pubes, groins, perineum, and the inferior parts of the nates. It was covered with varicose veins, and its skin was of a more natural state than that of the other parts of the swelling.

It was quite easy to ascertain that the swelling contained none of the pelvic viscera. From every indication it was also likely that the testicles were not essentially diseased. There were no symptoms of sarcocele. The general health of the patient was moreover very good, and his moral feelings perfectly favorable for undergoing an operation, to which he was fully determined to submit.

Unwilling to perform it without a consultation, I called together the army and hospital surgeons of Alexandria. I also requested the attendance of M. Pariset, who was then in that city, and of the surgeons of the French vessels stationed in the harbor; of these I may enumerate M. Band, chief surgeon of the frigate *Constance*, and M. Mauns, chief surgeon of the corvette the *Diligente*. The consultation decided that the operation afforded the only chance of saving the life of the patient, whose existence was rendered miserable, and could not be of long duration, if his malady were abandoned to a natural course. On the same day, therefore, at 10 A. M., the operation was performed in the following manner:—

The patient was placed on a bed, the buttocks elevated, and the thighs and legs held wide apart; standing at his right side, I formed upon the anterior part of the isthmus a flap of integuments four inches wide by five long (which I intended as a covering for the penis), by means of two perpendicular incisions directed from the fold of the groin downwards, and connected inferiorly by a transverse incision. By two curved incisions, directed on each side from the top of the perpendicular ribs, and turning round the isthmus to its posterior part, I formed also two other flaps, of rather more than a semi-elliptical shape, for the purpose of serving as an artificial scrotum, in case the testicles should be found healthy. In the dissection of these flaps, I divided a great number of vessels, some arterial, but principally venous, which I tied at once. The flaps having been dissected up, I proceeded to seek the penis, and this I readily arrived at, by introducing a straight catheter into the opening through which the urine escaped. By cutting down on the end of the sound, the glans were discovered, and by following the course of the sound, the canal was protected from injury till we arrived at the spermatic cords, which were freed by two oblique sections, directed from without inwards and above downwards. The cords were now found to be much swollen, at least three times more than the natural size, and from ten to eleven inches long. By following their extent I arrived at the testicles. The right was swimming in seven or eight ounces of serum contained in the tunica vaginalis; the left did not present this peculiarity. They were not longer than natural. The swelling and excessive length of the cords, however, having appeared to me such as to preclude the possibility of preserving his testicles,

I placed a ligature round each cord, and divided them within two fingers' breadths of the ring.

I then hastened to detach the tumor, without delaying to tie the vessels, after which there were but a few branches to be secured. I brought the integuments over the penis and perineum, united them with a few points of suture, and supported the entire by a T bandage. The operation was finished in twenty-two minutes. The patient endured it with admirable courage. Towards its conclusion syncope supervened for a few seconds, for which he was immediately placed on the bed, and a few spoonfuls of an ethereal mixture administered. He quickly recovered, and immediately asked for a pipe and a cup of coffee, with which he was indulged. He all along preserved the fullest confidence in the success of the operation.

Two hours after the operation the patient complained of pain in the perineum, and felt a strong desire to pass water, but, despite of all his efforts, he could not succeed in expelling a single drop. These symptoms having continued urgent for some time, I introduced a gum elastic *sonde*, by the assistance of which about a pint of urine was drawn off. The patient's distress still, however, continued, which, presuming to depend on a sympathetic irritation of the neck of the bladder, I administered an anodyne draught. This succeeded in tranquilizing the patient and making him inclined to sleep. He was then placed on absolute diet and flaxseed infusion.

4 P. M. Pain ceased, skin hot, pulse stronger but less frequent.

28th, morning. Disturbed night, sleep broken by dreams; pulse frequent; tongue moist; he refuses ptisan, and will only drink plain water. The dressings soaked in profuse exudation.

Evening. Calmer than before; allowed oranges at his own request.

29th, morning. Night tranquil; slept well for three hours; lips of the wound adhering in some points.

30th, morning. Slept well; pulse less frequent; tongue moist; dressings renewed; the wound less puffy and cleaner than before. In the evening there was a slight exacerbation.

31st. Slept well for several hours.

From this period he gradually, though slowly, improved, the wound undergoing the process of suppuration till the middle of June, when his cure was complete. His convalescence was considerably retarded by the ligatures to the spermatic cords producing suppuration of the groin, and remaining in the wounds in spite of all attempts at their removal, till a very short period before the completion of the cure.

Pathological examination of the tumor.—Immediately after the operation, I proceeded to the examination of the tumor in presence of the consulting surgeons. It weighed one hundred and ten pounds, not including a considerable quantity of serum which escaped during and after the operation. The skin was lardaceous, hard, and much thickened, lobular, infiltrated with yellowish serum, and overspread with a network of bloodvessels.

The centre of the tumor was formed of a yellowish, hard substance, of fibrous consistence, and creaking beneath the cutting instrument. The cords and epididymi were swollen; the connecting areolar tissue infiltrated with serum; the cords were nine inches long; the testicles of natural size and of healthy structure.

The canal which led from the end of the penis to the external surface of the tumor, was about eight inches long, and of the caliber of a large sound. It seemed to have been formed by the skin of the penis, distended and returned on itself.

Some of the tumors among the Chinese, with several cases. By G. T. Lay, Esq. *Lancet*, 1840, vol. xxxviii.

Tumors of every sort, situation, and size abound in the southern parts of China. They are sometimes encysted, or steatomatous, but more frequently sarcomatous, and are for a long time of so healthy a structure, that they seem to be natural appendages of the body. At the end of a space of time that varies in length, the textures give way, unhealthy matters are deposited, and the general health begins to suffer. The natives live upon a vegetable diet, which is well sodden in the dressing, and therefore swallow a great deal of warm water with their food. They use but little salt, as it is an expensive article in China, owing to the government monopoly. To a watery diet and great parsimony in the use of salt, I impute the prevalence of tumors; though this remark must be regarded only as conjectural. There is, however, an *experimentum crucis* which may be tried to ascertain the truth of this conjecture; for it appears that the wealthy, who can afford to season the vegetables, and eat more freely of animal diet, are not subject to these tumors. The walls of the hall in the Canton hospital are decorated with pictures representing individuals with tumors before excision, and again without tumors after they had recovered their health. They were painted by Lamaqua, who says, as the doctor receives nothing for "cutting," he can take no pay for painting. I will select a few cases from the quarterly report published in the *Chinese Repository* :—

Encysted Tumor. Wangke, aged 12 years, of Shunthih. This little girl is a slave, and was sold by her mother for eight dollars. She was accompanied to the hospital by her purchaser, a very respectable and well-bred Chinese woman, who said the child was not her own, yet she felt for her the affection of a mother; and though the blemish had been a sufficient excuse for returning her to the mother, she preferred not to do so; and having heard of the hospital in Canton, was at the expense of time and money to bring her, with the hope of relief. She had an encysted tumor, about sixteen inches in circumference at the base, situated upon the sacrum, and to the right side. The pressure had produced some absorption of the sacrum, and caused the os coccygis to turn outwards. It was movable, and hard pressure gave no pain. There was no weakness of the spinal column, or of the lower extremities. After suitable preparation of the patient it was removed, and found to be attached by a peduncle of the size of a common quill, which entered one of the posterior sacral foramina. On dividing it, one of the gentlemen who assisted, noticed a slight flow of milky substance from the point of attachment. A ligature was required to prevent the escape of the fluid from the tumor, which was distended with limpid contents, resembling a bladder of water. The wound was dressed as usual. The child was in a subcomatose state for some hours after the operation, and slow in answering when spoken to; perhaps from the opiate she had taken. In the evening and the next morning her pulse ranged from 130 to 140, with considerable fever, and there was anxiety for the result. Calomel and rhubarb were given, and brought away a quantity of large worms, and all her unpleasant symptoms subsided. The child's appetite became good, and the wound healed up by granulations in a little more than a month. She became the picture of health, and, with cheeks plump and rosy, was discharged at the expiration of six weeks.

Lew Akin, aged 12 years, of Tsunchun, a village of Shunthih district, and the only child of her affectionate parents, had a steatomatous tumor upon the right hip, of a magnitude that required the patient to lean forwards when she walked, in order to preserve her balance. Her health appeared good, except that she was much emaciated. In ten days she made surprising im-

provement under a generous diet. On the 27th of April, the usual indemnity (*i. e.*, that the surgeon shall not be held responsible if the patient dies) having been obtained, the tumor was removed in two minutes and fourteen seconds. Its circumference, exceeding that of her body, was two feet at the base, and much larger at the middle. It was very slightly attached, and consisted of concentric layers of fatty substance, separated from each other by a surrounding serous membrane, till near the centre it was found of a much firmer structure, resembling cartilage. Its weight was seven pounds avoirdupois. Upon the third day the dressings were changed; union had taken place to a considerable extent. In one week the whole was so far healed that the child was able to walk in the room, without pain to herself or injury to the wound. She is now in good health, and more fleshy than ever before. Since the first twenty-four hours after the operation she has experienced but little pain. The feelings of her father were particularly noticed by the spectators at the time of the operation. He was in the room, but the unsightly wound that presented itself, as the integuments retreated ten or twelve inches apart, the incision being about ten inches long, was too much for the father to witness without tears. He left the room, but the cry of his little daughter, when the needle passed through the integuments in applying the sutures, soon recalled him, as soon to retreat. This vigilance in his attention to his only child, continually day and night here, strongly exhibited the force of natural affections, equalled only by his gratitude for the relief afforded her.

Sarcomatous tumors.—Akæ, a little girl aged thirteen. As I was closing the business of the day, I observed a Chinese timidly advancing into the hospital, leading his little daughter, who, at first sight, appeared to have two heads. A sarcomatous tumor, projecting from her right temple, and extending down to the cheek as low as her mouth, sadly disfigured her face. It overhung the right eye, and so depressed the lid as to exclude the light. The parotid, and also its accessory gland, were very much enlarged. This large tumor was surrounded by several small and well-defined ones, the principal of which lay over the buccinator muscle. Slight prominences on other parts of the body indicated a predisposition to tumors, which I have since learned is hereditary. The mother presents a most singular appearance, being covered from birth with small tumors, some of the size of large warts, and others hanging pendant in shape and size like the finger. Akæ is the only one of her four children thus afflicted; her general health was somewhat deranged; the tongue foul, pulse frequent and feeble, and the heat of the tumor above the natural temperature of the system; the bloodvessels passing over it were much enlarged; the weight much accelerated its growth, and occasioned pain at night in the integuments around its base; the child complained of vertigo, and habitually inclined her head to the left side. According to the statement of her parents, the tumor was excited into action by the smallpox, which the child had four years since, but within the last four months had attained three-fourths of its present magnitude. The child was put under medical treatment for a month, during which her health decidedly improved.

On the 19th of January the operation was performed. The serenity of the sky, after several days of continued rain, the presence and kind assistance of several surgical gentlemen, and the fortitude of a heroine with which the child endured the operation, call for my most heartfelt gratitude to the Giver of all good. A few days previous to the extirpation, an evaporating lotion of *nitrat. potas.* was applied to the tumor; an opiate was given fifteen minutes before, and wine and water during the operation. The patient cheerfully submitted to be blindfolded, and to have her hands and feet con-

fined; the extirpation was effected in eight minutes. Another small tumor of the size of a filbert, was also removed from under the eyebrow; the loss of blood was estimated to be about ten or twelve ounces. *Not an artery required to be taken up.* She vomited, but did not faint. The tumor weighed one pound and a quarter; the circumference at its base was sixteen inches and three-quarters, and the length of the incision from the top of the head to the cheek ten inches. On opening it I found portions of it becoming black, and two or three drachms of sanious blood, of a dark chocolate color, indicating that it had already taken on a diseased action. After a nap, the child awoke cheerful as usual; in the evening her pulse accelerated, and she complained of nausea, but ever afterwards uniformly said that she had no pain. No inflammation supervened, and the wound healed by the first intention. Three days after the operation, in several places of an inch or more in length, it had completely healed, and in fourteen days the whole, except a spot of the fourth of an inch, was entirely healed. In eighteen days the patient was discharged.

Osteo-medullary sarcoma of the right wrist.—Oct. 30, 1838. Leäng Yen, aged 34, from the neighborhood of Hwate, "the flower gardens." In Oct., 1837, the disease commenced, at the extremity of the radius, and it had gradually increased until it now measured one foot seven inches around the wrist, and about the same at its base. It had never been remarkably painful, neither had the discharge of blood been great. The patient's countenance was very sallow, and face and extremities generally œdematous, particularly on the right side. The monthly discharges were interrupted about the time the disease began. The patient had a morbid appetite, eating as much as in health. I remarked that the hand below the tumor was but slightly affected by the disease in its neighborhood; the hairs upon the back were unusually large, and seemed to have participated in the unhealthy activity of the nutritive functions. This patient had less principle and more cunning than some of her countrywomen, and proposed that Dr. Parker should give her 200 dollars for the pleasure of cutting off her arm. This offer was, of course, declined, and the patient continued to ebb and flow in moody humor, now consenting, and then refusing, till December, when it was finally agreed that the arm should be amputated on the 12th. She was then so much reduced, that some doubted whether she would survive the operation. This, however, she bore with uncommon fortitude, and showed no uneasiness, save at not being allowed to follow the knife and the saw with her eye. She had always sneered at the idea of pain, and her practice was a full verification of her theory.

She left the hospital on the 17th of January, in excellent spirits, with her husband, after expressing herself highly grateful to the doctor for his kindness, care, and skill. Dr. P. remarks: "The examination of the forearm evinced the propriety of amputation above the elbow. The disease evidently commenced in the marrow of the radius, and near its head; and then involved the bones and soft parts in the common disease. The tumor was surrounded by a plate of bone the thickness of the pericranium, which being sawed through exposed a mass of matter of the consistency of brain. There were a few apertures at which this medullary substance had protruded, and expanded itself like a mushroom."

Fleshy tumor of the left eye. Jan. 4, 1836. Ayu, aged 17. The tumor had commenced fourteen months ago, with a slight enlargement of the caruncula lachrymalis, and gradually extended along the globe of the eye, both above and below, till its branches met the external angle, so that the patient was unable to close the lids. When I first saw him, it extended out one quarter of an inch, and was a little inflamed at the apex from external irritation.

Slightly lobulated, it closed like the unexpanded petals of a rose, concealed the cornea, and excluded all light. A similar disease had commenced in the right eye. On the 14th of January the tumor was removed. With a sharp pointed bistoury I severed the tarsi at their external union, divided the tumor down to the globe, first dissected it from the lower side, and then from the upper lid and inner angle. The eyeball was unaffected, and the sight restored; the hemorrhage was not great. The upper lid was much swollen, and the granulations prominent. Having cleansed the eye from blood, and injected a little camphor and water, in the evening bled him to twelve ounces, and he had a comfortable night. He was treated antiphlogistically, and the probe daily passed around to prevent adhesion of the lids to the ball. Evaporating lotions were applied to the lids, and pleasing hopes entertained that the disease would not return. But when the patient left the hospital about four weeks after to spend the new year's festival at home, the tumor had again attained a considerable size, notwithstanding the frequent application of lunar caustic in substance and solution to prevent it.

SECTION XI.

EFFECTS OF LIGHTNING.

CASE I. *Miraculous escape of two persons injured by lightning.* By O. H. Taylor, M. D., of Camden, New Jersey. New Jersey Med. Reporter, 1854.

"The lightning seemed to have stricken him upon the top of the head, and to have passed down the posterior part of the neck; thence down his gold guard chain (which was of unusual thickness) upon each side of the chest, melting two of the links, blackening the chain, and leaving a distinct black mark upon the shirt-bosom which could not be removed by washing. A silver pencil which he carried in his vest pocket was penetrated at one spot, by a hole of the size of an ordinary pin, and was melted in two different places. The hair was scorched, and the back of the neck burnt and blistered by the current of the fluid. Below the guard chain, the first visible marks of the current were found upon the left side of the boot, where it made a perforation about equal in diameter to a small quill, the boot being burst open on both sides. Immediately within this perforation there commenced a narrow line of ecchymosis, leading downwards to the junction of the first and second toes, and directly beneath this point there was a perforation through the sole of the boot, through which the fluid apparently found its way towards the soil.

To this I will add another case, coming solely under my own observation, on the same evening. Mrs. Hamill, a well known and respectable lady, mother of the ex-mayor of that name, was struck at her residence near Kaighn's Point, about three-fourths of a mile due north from the building in which the former patient suffered, and almost at the same moment of time; for the storm, though the discharges of electric fluid were terrifically rapid, passed over the city in a few minutes. The particular flash which prostrated Mrs. H. must have been of very great power, for it dashed the plaster violently, and in masses from the walls, forced the washboards from their places, tore up the second floor, threw a heavy bureau bodily from its position against the wall, to the middle of the room, committed extensive havoc with the furniture of the two principal apartments, and left the main building almost a wreck.

At the moment of the blow Mrs. H. was seated and occupied near a window looking south, and fortunately in a corner of the upper apartment, remote from that in which the lightning exerted the greatest violence, so that little

damage was done immediately about her; yet even here, a most formidable current appears to have passed along a heavily loaded double-barrelled gun, which was resting immediately behind the chair in which she sat. It did not discharge the piece, but having reached the extremity of the barrels, it perforated a neat round hole, one inch in diameter, through the partition against which the gun-barrels rested, into the next apartment, where it tore up a portion of the floor, and descending to the parlor beneath, shattered two mirrors, destroying much of the furniture, and injuring, more or less, every article in the room.

After the flash, the uninjured members of the family found Mrs. H. insensible and prostrate on the floor. They had recourse to the now popular remedy in cases of lightning strokes—the dashing of cold water over the person; but the insensibility continued for nearly an hour. On my arrival I found her partially recovered, but complaining of severe pain, extending from the right hip to the corresponding ankle. The course of the fluid, while in contact with her person, was clearly traceable on examination, by means of a distinct red line, extending down the outside of the limb to near the outer malleolus, and thence around the limb to the inner malleolus on the same side.

The subsequent history of this case bore a general resemblance to a partial paralysis of the right lower extremity. Considerable lameness continued for several days, and was attended with pain. No derangement of the visceral functions displayed themselves, and the patient was soon restored to her original state of health, by frictions and stimulating applications to the limb."

CASE II. *Singular effect of lightning on a patient.* Revue Médicale—Lancet, 1830, vol. xviii.

At a late sitting of the Institute, the following communication was made by M. Verges: On the 20th of last March, the lightning struck a man whilst in the field, and sitting quietly against a wall; the electric fluid entered apparently between the neck handkerchief and the skin, at the right side of the back part of the neck, and proceeded over the arm to the hand; its principal effect was, however, on the dorsal and lateral surfaces of the chest; in the lumbar region it had turned towards the navel, and thence to the abdomen, to the genital organs, and the legs down to the toes. In the whole of its course, the lightning appeared to have affected only the integuments, which were black, covered with phlyctenæ, and in numerous places perforated; the epidermis was in many parts, to a greater or less extent, completely destroyed; the hair of all the parts struck by the lightning was burnt. The lesion of the skin very much resembled a burn, and also caused a similar pain; a large portion of the dress was destroyed or damaged; the shirt was almost completely burnt. At the outer side of the shoe, whence the lightning seemed to have entered the ground, there was a cleft of about three inches in length. Neither during nor after the accident did the man lose his senses, and he declared that at the moment of the concussion, he had the full consciousness of what happened to him. His nervous system did not appear in any respect to be affected; the pulse was regular, and there was no fever; he complained only of violent pain in the wound, and excessive thirst, and felt as if he was constantly enveloped in fire, etc. His wife, who had been present at the accident, had only been thrown down, without receiving any further injury; she stated that at the moment of the flash, she had seen her husband surrounded by a bright flame.

CASE III. *Paralysis cured by lightning—strong physic that.* Brewster's Philosophical Journal.

Upon what principle the following extraordinary cure was effected may be a matter of disputation ; whether the electric fluid acted as a powerful stimulus to the nervous system, and thus induced a return of sensorial power, or, whether the cure may be referred to the agency of *fear*, which we have seen in many instances a perfect miracle-worker, are two of the most obvious questions which present themselves. The facts are these : A ship, called the *New York*, was on her passage from London to New York, a voyage generally performed in about a month, when a stroke of lightning overturned the partitions, but no person was hurt. The vessel was deprived of its conductor, but, on the following day, the captain, dreading another storm, placed a conductor upon the mainmast. The lightning struck the rod on the same day, and melted it entirely ; the iron conductor was also melted, and fell in drops into the sea. Almost all the passengers observed the water of the sea sink down in a distinct manner, in a certain space round where the electric fluid had entered the ocean. The rod of the conductor, which was melted, was four feet long by five inches and a half in diameter, and the iron conductor was three-tenths of an inch in diameter.

The second stroke of lightning, like the first, killed no one, but, on the contrary, it performed a very remarkable cure. A passenger, very old, and overgrown with fat, was so much palsied in his limbs, that for three years he had never been able to walk above half a mile, and, after his embarkation, had never been seen to stand up for a single instant. However, soon after the second discharge of electric fluid, which took place near to where the poor invalid was lying, he was observed, with astonishment, parading the deck, which he continued to do for some time, as if he had never been ill. At first he lost his senses, but this did not last long, and the cure was complete ; he walked with ease all the rest of the voyage, and had the entire use of his limbs when the vessel arrived at New York, and travelled on foot thence to his own residence.

The knives and forks of iron in the ship were melted, and had acquired magnetic power. The effects produced upon the magnetic needles were very remarkable, for, although they were all in the same room, the results were diversified ; in some the magnetic action was augmented, in others it was diminished ; in some it was destroyed, and in others the poles were reversed. An excellent chronometer, whose error never exceeded the tenth of a second in twenty-four hours, was so much deranged by the stroke of lightning, that it was accelerated thirty-four minutes. The cause of this error was discovered in London, where it was ascertained that all the parts of the instrument had acquired a certain degree of magnetism, in such a manner that the general motion depended very sensibly upon the position in which the chronometer was placed.

CASE IV. *Cancer cured by lightning—which is the worse, the remedy or the disease ?* Lancet, 1855.

A ploughman in a field, Reuben Stephenson, of Langtoft, England, was struck down by lightning, when both his horses were killed on the spot, and he was so much injured that his life was at first despaired of. In consequence of the accident, Dr. Allison of Birdlington, attended upon the man, and whilst doing so, found he was suffering from a malignant cancer of the lip. When Mr. Stephenson had sufficiently recovered from the effects of the lightning, an arrangement was entered into for the removal of the cancer by an operation ; but, strange to say, just when this was on the point of being

performed, a minute inspection was made of the cancer, when it was discovered that from the time of the accident, a healing process had been commenced in the lip; this being so evident, the operation was, of course, not attempted; and, in a moderate space of time, the man was completely cured.

CASE V. *Facts relative to a stroke of lightning.* By B. Boddington, Esq. Communicated by Prof. Faraday. *Lancet*, 1832, vol. xxii.

On Friday, the 13th April, 1832, Mr. and Mrs. T. T. Boddington, having partaken of some refreshment at Tenbury, placed the servants inside their post chariot, and themselves mounted the barouche-seat behind, that they might enjoy the scenery on the road to Bromyard through the ramifications of the Abberley hills. It was about half-past three when they left, the sun shining and the sky serene; but before they had proceeded far, they observed a dark and singular-looking cloud to arise, nearly in the direction of their route; and at the end of about three miles and a half a few drops of rain began to fall. They debated whether they should get inside the carriage, but agreed that the storm, for such it appeared to be, was passing off to the right, and that it would in all probability be only a slight shower, as the cloud in their immediate vicinity, though peculiarly dark and angry looking, was of very small dimensions. At this time a clap of distant thunder was heard, but no lightning seen. Mr. Boddington put up an umbrella; but perceiving it was an old one, somewhat torn, belonging to one of the servants, he gave it to his wife to hold over her bonnet, while he put up another. While in the act of extending the latter, a flash of lightning struck them both senseless, threw the horses on the ground, and cast the postboy to a considerable distance. The servants inside were untouched, and, indeed, unconscious of the real nature of the accident. The man says that he heard no previous thunder, but that a vivid flash of lightning, proceeding, as he thought, from the side of the road next to which he sat, was accompanied by an instantaneous report, like the discharge of a highly loaded blunderbuss; and concluded that some robber or other mischievous person had shot the horses. He acknowledges that he was so panic-struck, that for a few seconds he sat still; but on recovering from the momentary alarm, he let down the side-glass and looked out to see whether his master and mistress were safe. He was shocked to see the head of the former hanging over the seat, and apparently lifeless. He immediately jumped from the carriage, and ascending the step behind, raised his master's head, and found that his clothes were on fire; his mistress was standing up, tearing off her bonnet and shawls. Her account of the matter is this—that she neither saw the flash nor heard the thunder; but her first consciousness was the feeling of suffocation, and that she was pulling off her things to obtain air. She felt, however, that they had been struck with lightning, and immediately began assisting the servant to extinguish the fire that was still consuming the dress of her husband.

The passage of the electric fluid as connected with Mrs. Boddington, was most distinctly traced: it struck the umbrella she had in her hand; it was an old one made of cotton, and had lost the ferule that is usually placed at the end of the stick, so that there was no point to attract the spark. It was literally shivered to pieces, both the springs in the handle forced out, the wires that extended the whalebones broken, and the cotton covering rent into a thousand shreds. From the wires of the umbrella the fluid passed to the wire that was attached to the edge of her bonnet, the cotton thread that was twisted round that wire marking the place of entrance, over the left eye, by

its being burnt off from that spot all round the right side, crossing the back of the head and down into the neck above the left shoulder. The hair that came in contact with it was also singed; it here made a hole through the handkerchief that was round the throat, and zigzagged along the skin of the neck to the steel busk of her stays, leaving a painful but not deep wound, and also affecting the hearing of the left ear. It entered the external surface of the busk. This was clearly proved by the brown paper case in which it was inclosed being perforated on the outside, and the busk itself fused for about a quarter of an inch on the upper surface, presenting a blistered appearance. Its passage down the busk could not be traced in any way; there was no mark whatever on the steel, nor was the paper that covered it discolored or altered in the slightest degree; its exit at the bottom, however, was as clearly indicated as its entrance at the top; the steel was fused in the same manner, and the paper was perforated in the same way, but on the opposite side.

The magnetic properties acquired by the busk are curious. Both ends attract strongly the south pole of the needle, the upper point for some considerable way down; it then begins to lose power over the south pole, and the point of northern attraction is at about one-third of the length of the busk from the bottom, so that by far the greater portion of the whole has acquired southern attraction.

There were marks of burning on the gown and petticoat above the steel, and the inside of the stays, and all the garments under the stays were pierced by the passage of the fluid to her thighs, where it made wounds on both; but that on the left so deep and so near the femoral artery, that the astonishment is that she escaped with life; even as it was the hemorrhage was very great. Every article on which she sat was perforated to the cushion of the seat, the cloth of which was torn much more extensively than the clothes. In most cases they were pierced by a hole not exceeding the size of half an inch in diameter, and where the rents were larger they did not extend beyond an inch or two in any direction; but it is worthy of observation, that every article the electric fluid passed through had a singed appearance at the edges, and had a sulphurous smell, as I was informed by those who inspected them immediately after the accident. By the time I reached Tenbury, all trace of the smell had vanished. No ignition, however, took place beyond what occurred at the moment of its passage, notwithstanding the inflammable nature of most of the articles; nor did any of Mr. Boddington's wounds present the appearance of burns. The cushion of the barouche-seat was stuffed with curled horsehair, through which the stream must have passed, though no sign to indicate its passage was visible; the cloth edge of the cushion, however, immediately behind where Mrs. Boddington sat, was torn outwards, and the leather that covered the iron forced in the same spot, already marking its egress at this place.

As this same iron also received the charge that struck Mr. Boddington, I shall now state the effects of the lightning on him, before I trace its further progress. When first discovered by his servant he was insensible, and he remained in that state for about ten minutes, when he recovered sufficiently to inquire where he was, but relates that he was perfectly unconscious of what had occurred; that he felt his eyesight affected, and pain all over him, but knew not from what cause these sensations arose. The umbrella in this case also was the conductor; it was made of silk, and was but little damaged, a small portion of the upper part only being torn where it joins the stick, and none of the springs or wires being displaced. The main force of the shock,

however, appears to have passed down the handle to his left arm, though a portion of it made a hole through the brim of his hat, and burnt off all the hair that was below it, together with the eyebrows and eyelashes. The fragments of the burnt parts falling into the eyes nearly deprived him of sight for two or three days, but the eyes were not otherwise injured. The electric stream shattered the left hand, fused the gold shirt-buttons, and tore the clothes in a most extraordinary manner, forcing parts of them, together with the buttons, to a considerable distance, and a deep wound was inflicted under their position on the wrist. The arm was laid bare to the elbow, which is presumed to have been at the moment very near his left waistcoat pocket, in which there was a knife; this also was forced from its situation and found on the ground; a severe wound was made on his body, and every article of dress torn away, as if it had been done by gunpowder. From the knife it passed to the iron of the seat, wounding his back, and setting fire to his clothes in its passage. Another portion descended to the right arm, which had hold of the lower part of the stick of the umbrella, was attracted by the sleeve-button, where it made a wound, but slight as compared with that on the left, passed down the arm (which it merely discolored, and broke the skin off in two or three places) to a gold pencil-case in the right waistcoat pocket. The great coat he had on was an old navy watch-coat, commonly called a *pea-jacket*, and of great thickness; this was torn to pieces, and the coat immediately above the waistcoat pocket much rent, but the waistcoat itself was merely perforated on the external part, where the discharge entered, by a hole about the size of a pea, and on the inside by a similar hole at the other extremity of the pencil-case, where it passed out, setting fire to his trowsers and drawers, and inflicting a deep wound round his back, the whole of which was literally flayed.

A very striking difference was observable in the wounds of Mr. and Mrs. Boddington: hers, as I before stated, were fractures of the flesh; his, on the contrary, whether deep or shallow, were all of them burns, and had a white and blistered appearance. The accumulation of force which the electricity acquired at this place deserves particular attention. I have observed that the shock on the right arm was nothing as compared with that on the left; the shirt-button was unchanged and unmoved from its position, and the passage of the fluid down the arm barely indicated; yet when it arrived at the pencil-case the amount of its intensity was such as to melt one end of it, and displace a cornelian seal at the other extremity, forcing it, I suppose, to some distance, as it has never since been found, though it was carefully sought for. It should seem that this accumulation of strength must have been derived either from the portion that passed over Mrs. Boddington, or from union with that which went down the left arm. In either case it appears to have been strangely diverted from its original source. The whole shock was now collected in the iron that formed the back of the barouche-seat; the leather attached to it was torn off, and the iron itself broken in two, immediately opposite the spring, and the ends of the fractured parts bent forwards so as nearly to touch it; by this conveyance it is supposed to have diffused itself over the whole of the under carriage, and to have passed to the earth by the tires of the wheels, four holes being made in the road at the points they touched at the moment of the shock, though the carriage was not standing in them at the time it stopped.

The post chariot was a new one, and the only injury it received was the fracture and derangement of the barouche-seat, as already stated, the removal of the japan in a line along the bulge behind, and the breaking of the pole;

the latter circumstance I conceive to have arisen solely from the fall of the horses, and to have been quite independent of the passage of the electric fluid. The horse the postilion rode was found to be dead, the other was evidently panic-struck but unhurt, as he rose as soon as the harness was cleared from him, and though in a profuse sweat and trembling, he soon recovered, and not only was ridden back for assistance, but returned again in the chaise that conveyed the poor sufferers to Tenbury, where they were detained at the inn for a month, before it was thought safe to remove them.

On inspecting the dead horse no wound was visible, nor any apparent cause for his death; the brass front of the bridle was observed to be indented inwards, as if struck with a hammer; and when he was skinned a corresponding mark was found on the bone of the head; and from that spot to the termination of the spine the flesh was quite black and putrid for about the width of three inches, and there were diverging marks of the same nature on each side of the head passing under the throat, and similar but much wider ones on the flanks. The postboy was thrown some yards off, but this I conceive to have been by the spring of the horse when he was struck dead, and that spring doubtless jerked the carriage beyond the holes where the lightning had passed into the earth. The boy was shaken by his fall, but was in other respects unhurt. I inspected the spot nearly three weeks after the accident happened, and found it was elevated ground, but by no means the summit of the surrounding country; on the contrary, there were many higher hills in the neighborhood; the road itself was so much hollowed out, that the banks must have been nearly equal to the height of the carriage. In a fen to the right, within a few yards of the hedge, and exactly opposite to where the shock took place, was a very high pear tree; it, however, bore no trace of injury. The carriage appears to have been passing close to that side of the bank, as the holes to which I before alluded were still distinctly visible; indeed, the two to the right had undergone very little change, as they were nearly off the road; they were about fifteen inches in diameter, perfectly round, and nearly as deep as they were wide, the stones appearing to have been thrown out as if by a miner's blast.

The collateral facts must now be mentioned. The landlord of the inn at Tenbury informed me that he was sitting in his parlor, talking to another person, when he saw the flash of lightning that must have caused the accident; he observed to his companion that he had never before seen so singular a flash, as it appeared to divide into four parts when it came within about 30 yards of the earth; this statement was confirmed by the person who was with him. It should seem, therefore, they were not struck by a single discharge of electric matter, but were enveloped in a mass of electricity; and this is the more probable from the traces of the different strokes being so distinct, and yet taking such opposite directions. The fluid seems to have pervaded the whole atmosphere, as many things were magnetized that were not in the line of any of the tracks that could be traced. For instance, Mr. Boddington's watch was in his fob, and quite out of the line described by either of the shocks that passed over him. After the accident, it was found necessary to send it to a watchmaker, and when taken to pieces, parts of it were discovered to be highly magnetized, the balance-wheel in particular. This was shown to Dr. Faraday when at Oxford, who set it afloat on a cork, and found the poles to be so well defined, that I have since had it mounted as a compass. Two pairs of scissors, also, in Mrs. Boddington's workbox, inside the carriage, were by mere accident, two months after the event, discovered to be magnetic.

CASES VI.—X. *Extraordinary effects of a stroke of lightning ;—death ; irregular menstruation ; the catamenia regularly and permanently restored in a negress seventy years old.* By Prof. John Le Conte, M. D. New York Journal of Medicine, 1844, vol. iii.

On Sunday, the 2d of July, 1843, about 3 o'clock P. M., five negroes were simultaneously prostrated by a single stroke of lightning, on a plantation situated near the Southern boundary line of Liberty County, Georgia, in latitude about $31^{\circ} 30'$. The sun was shining brilliantly at the time, and the greater portion of the visible hemisphere presented the usual serenity of the summer sky. A singular and rather angry-looking cloud had, for a short time previously, been observed near the verge of the southeastern horizon, from which occasionally proceeded the low rumblings of very distant thunder. But nothing in the appearance of the heavens betokened the immediate proximity of a thunder-storm, or prepared them for the terrible electrical explosion which followed. Not a drop of rain had yet fallen, and the earth was quite dry. Such was the condition of things, when suddenly the whole atmosphere in the neighborhood was momentarily illuminated by what appeared to be an universal flash, which was accompanied, or rather instantly succeeded by a single astounding report. No dust was observed to rise from the ground, nor any other evidence of mechanical violence. No thunder was heard after this explosion ; the cloud quickly dispersed, precipitating only a little rain a few minutes after the accident ; and in the course of an hour, the atmosphere resumed its usual tranquillity. The five negroes were taken up in a state of insensibility, amounting to apparent death. There was no white person on the farm at the time, and nearly two hours elapsed before medical assistance could be rendered. In the details annexed, I have endeavored to render the history of each case as complete and accurate as is consistent with the character of the evidence and the attending circumstances. It is to be regretted that a more minute and rigorous examination of the bodies of those killed was not made, for it is possible that marks of the effects of electricity, and indications of the cause of death, might have been discovered.

(1.) A negro girl, Adeline, aged about thirteen years, was up in the branches of a small mulberry tree, twenty feet high, and standing sixteen feet in front of a line of negro houses, which extended parallel to a wood situated one hundred yards in the rear of the same. She was engaged in throwing down the fruit for her little companion below. Every principle of life seems to have been instantly extinguished by the intensity of the electrical shock ; her body had to be taken down from the branches of the tree where it had lodged. No marks of external injury observed.

(2.) Another female child, Kitty, aged about six years, was standing immediately under the tree. She was instantaneously killed. No superficial marks of injury observed.

(3.) Chloe, an adult woman, aged forty years, was walking about ten feet more remote from the base of the tree than the latter child ; and also, about five feet more distant than the two who survived the shock, viz, than cases 4 and 5. She was instantly killed. No marks of injury recognized, excepting a burnt spot, the size of a dollar, under the right axilla. Her clothes were set on fire ; but this was probably occasioned by the breaking of a tobacco-pipe which she was smoking at the time, and which scattered the ignited contents over her cotton garments. In the three cases above mentioned, all the ordinary attainable means of resuscitation were tried without success.

(4.) Charlotte, an adult woman, aged twenty-nine years, was standing half-way between cases 2 and 3, and consequently, about five feet from the root of the tree. After remaining in a state of insensibility for some time, she gradually recovered her consciousness. A dose of castor oil was then administered. The skin on her right shoulder was abraded for a space as large as a dollar. Her clothes were rent into shreds; on the right side of her body, the skin was blistered and marked with discolored streaks, which extended anteriorly on the lower portion of the abdomen towards the pubes. A small streak likewise extended along the interior aspect of the right arm. She complained of pain in the stomach and bowels for three weeks. No vomiting or burning in the hands and feet, as was experienced in the next case. She has been married several years, but has never been pregnant. Her menstruation was perfectly regular prior to the reception of the shock; but has since that time been very irregular; sometimes having two periods per month, and then escaping two months. The flow has also been much diminished in quantity. Her health has not been very good since she was struck; manifestly resulting from her menstrual irregularity. A recent copious bleeding has afforded her evident and immediate relief. Her reproductive functions appear to continue dormant.

(5.) Sarah, a woman aged at least seventy years, was standing immediately beside the last. She likewise gradually recovered her consciousness. No medicine was administered. Her clothes were rent; and after a few days, marks of discoloration were manifested along the right arm and right side of the trunk. A violent paroxysm of vomiting followed the restoration to a state of sensibility; which continued, with occasional interruptions, for ten or twelve hours. As in the preceding case, she complained very much of pain in the region of the stomach and bowels, for at least two weeks after the accident. A troublesome sensation of burning was experienced in the palms of her hands and the soles of her feet; and in the course of two or three weeks a swelling made its appearance under the right foot, which ultimately resulted in the exfoliation of a portion of the thick indurated epidermis of that part, about one and a half inches in diameter.

The catamenial discharge, which had, in accordance with the ordinary arrangements of nature, ceased for more than twenty years, was completely, and thus far, permanently re-established!! At least, a discharge from the genital organs, having all the obvious and sensible physical characters of the catamenia, and observing, with vigorous exactitude, its peculiar law of periodicity, has been established, and continues to recur, with the utmost regularity, up to the present time (August, 1844), after the lapse of more than a year! She has not missed a single menstrual period since she was struck by lightning. To use a liberal paraphrase of her own language, her "Moon returns as regularly as when she was a young woman." The flow comes on with the usual premonitory symptoms. Her mammæ have undergone an obvious preternatural enlargement, apparently originating in a sympathetic irritation, emanating from the establishment of the reproductive functions. This woman has had but one child, to which she gave birth soon after reaching womanhood. The catamenial flux is represented to have been regular up to the period of its natural cessation, between forty-five and fifty years of age; subsequent to which epoch, she has presented all the appearances ordinarily attending the gradual approach of the state of senility in a vigorous constitution. The electrical shock, likewise, completely relieved her of a troublesome stranguery which had harassed her for four or five years. Very recently she has, occasionally, had a slight recurrence of the same complaint; although under

a much milder form. Otherwise, her health continues perfectly good; there being, so far as symptoms show, not the slightest indication of the supervention of organic disease of the uterus.

I regret that no opportunity has been afforded for examining, in a critical manner, the condition of the genital organs, and the character of the fluid which is periodically discharged; as it would have effectually removed any degree of scepticism which might possibly arise in the minds of some persons, on the score of the vagueness of negro testimony. I trust, however, that the system of minute interrogation and rigid cross-examination, which was adopted in eliciting the facts, has precluded the possibility of the occurrence of any material error; especially when it is considered that there could be no possible motive for practising deception, in a matter of this kind, on the part of a faithful old slave. Under any view of the question there can be no reasonable doubt concerning the strict menstrual periodicity of the phenomenon; and it would be difficult to assign any other than a functional origin to a discharge observing such a law.

SECTION XII.

HUMAN HORNS.

CASE I. *A horn seven inches in length and two and three-quarters inches in diameter on the forehead of a negro woman; excision.* By F. P. Porcher, M. D., of Charleston, South Carolina. Charleston Medical Journal and Review.

The subject of this remarkable case was a negress, aged about 52, born on a plantation in St. John's, Berkley, S. C., and owned by Mrs. P. She was otherwise remarkably healthy, and the mother of several children. The tumor commenced forming some eight years since, with a swelling and discharge, and, after awhile, a gradual increase in size. During the four months preceding its removal it grew some two inches, and having, in curving around, reached the face in the temporal region, just to the left of one eye, and having commenced to produce suppuration of the skin with which it had come in contact, its immediate removal was necessitated.

The horn, as it may very properly be called, is about *seven inches in length following its outer border, the other and shorter border being precisely four. Its greatest diameter is two and three-quarters inches.*

In appearance it bears a striking resemblance to a ram's horn—being corneous in structure and smell; convoluted, twisted and curved, with scales on the portion nearest the point of union with the head. It grew from the right side of the head, just over the point of junction of the parietal and frontal bones.

Its removal, which was done in Dec., 1854, in the presence of Dr. D. J. Cain, and several students of the Charleston Preparatory Medical School, was accompanied with comparatively little pain, and was accomplished with a simple bistoury passed around its base. It was found to be attached to the scalp and periosteum; its proper hard structure becoming cartilaginous and soft as the skull was approximated, so as readily to allow of its entire base being divided with the knife.

There was comparatively little bleeding, a compress of lint and a bandage sufficing, after a little while, to arrest it. These were not removed for several

days; simple dressing completed the cure, and in about three weeks she was sent back to her mistress completely well. It was found, upon examination afterwards, that some remains of the original growth remained, and there is some probability that it may increase in size and again require removal.

The patient tells me that she has been deaf in one ear ever since the growth first made its appearance, which can be explained by pressure on nerves of the neighboring parts. She says it commenced from a slight injury received on the head from a fall.

CASE II. A horn six and three-quarters inches in length and three inches in circumference on the head of a woman; excision. By A. L. Sands, M. D., of Cold Spring, New York. *New York Journal of Medicine*, 1851.

In the spring of 1851, I was called to see Mrs. W——, aged fifty years. She had always enjoyed good health, and was naturally of a full habit. She informed me that she had a "horn" on the back of her head, which had caused her much trouble and uneasiness for a long time, owing to which circumstance she desired its removal. On removing the covering which she kept continually over it, a fine specimen of ichthyosis cornea, of sixteen years' growth, was at once brought into view. On inspection, it was found to arise from, or rather immediately over, the occipital protuberance, and to extend downwards and backwards about four inches, and then curling upon itself, terminating in a rough sulcated extremity. On handling it, it was found to be very hard, solid, and, when struck with the handle of a scalpel, gave a sharp clear sound; its attachments to the occiput did not appear to be very firm, as they allowed slight motion. Seeing no difficulty in the way of its immediate removal, an elliptical incision was made on each side of it through the integuments down to the periosteum, and then slipping the scalpel between the base of the horn and the bone, it was easily removed. There was little hemorrhage, and the wound healed kindly by first intention.

On examination after removal, the horn was found to measure six and three-quarters inches in length, and three inches in circumference at the base.

One very interesting point in the progress of this case may be found in the history which she gave of the treatment which had been pursued in order to obtain relief. When first perceived, it felt like a shot underneath the integuments; after some time it made its appearance on the surface of the skin, and several times she picked it off, but after a while it became so firm that she was obliged to allow it to remain. She took no notice of it for some time, but, becoming so large as to interfere with the proper adjustment of her cap, and obliging her to raise her head from the pillow at night whenever she wished to turn over in bed, while it also incommoded her in reposing upon her back, she was necessitated to apply to her family physician (a homœopath) for relief, who promised her that in the space of a short time he would be enabled to remove the difficulty by the use of sundry small white pills which he proceeded to furnish her with; while at the same time he assured her that he had treated successfully, to a cure, several similar cases within the past year in his own practice. For five years she continued to use the homœopathic pills, but still the horn remained—still the horn continued to grow. In view of this condition of affairs her faith began to falter, but for some time it was supported with the assurance of her physician that the only reason that the cure had not been effected was, "that he had not as yet got hold of the right pills." Reassured by this assertion, which was repeated from time to time, she kept on until the spring of the present

year, when she consulted me, and finally submitted to its removal by the knife.

CASES III.—VI. *Horny excrescences, growing from the human head; excision.* By W. C. Worthington, Esq., Surgeon, of Lowestoft. *Lancet*, 1836, vol. xxx.

(1.) Doctor Pensa of Naples, *Journal de Prag.*, relates the case of a man with a horny excrescence over the uppermost portion of the right parietal bone. It was of the size of a goat's horn, being about six inches in length, and of a spiral form; the person was seventy-five years of age. Its substance was very hard, and its nature rather oily. It was of a yellow color and fibrous texture. The extirpation of it was performed without difficulty. Six weeks after the operation two small horns began to sprout from the cicatrix, but afterwards spontaneously disappeared.

(2.) An extract from an American journal went the round of the newspapers in 1827, concerning a horn which had grown from the head of a woman of that country, and was spoken of as an extraordinarily rare occurrence.

(3.) But perhaps one of the most remarkable and best authenticated cases of this sort upon record, occurred in the practice of Dr. William Roots, of Kingston-upon-Thames, who, in February, 1811, amputated a horny excrescence from the head of a man, between fifty and sixty years of age, exactly resembling a ram's horn, a drawing of which, in its growing state, as well as the horn itself, was presented by him to the collection of Sir Astley Cooper. The account given of this case is, that John Kennedy, in the year 1796, had a tumor growing from the superior part of the occiput, which was taken off with the knife by the Doctor's father, in about three years from its commencement. Soon after its removal, a horny substance made its appearance on the same place, which continued growing for four years, until it accidentally fell off in a most unexampled manner, leaving the surface of the part from which it grew perfectly smooth, resembling the superficies of the stag's head when his horns have recently dropped. In a short time afterwards, a new horny sprout shot forth, which, as it grew, took on the exact form and figure of a ram's horn. It continued to increase for a period of seven years, without any disposition to fall off, to the great annoyance of the poor man. He consented at length to its removal, in the performance of which, from the parts underneath being vascular, a considerable hemorrhage ensued.

(4.) A very remarkable case, illustrative of this playful freak of nature, came under my own immediate notice, a short time since, presenting, however, some modification of character from that of Dr. Roots, inasmuch as the horny excrescence had never shown any disposition spontaneously to exfoliate. A woman, nearly seventy years of age, residing in the parish of Rushmere, five miles distant from Lowestoft, perceived, as far back as thirty years ago, a hard substance, like horn, growing from the integuments of the head, just over the parietal bone, to the right of the sagittal suture. It continued progressively increasing, until it arched over the os frontis, presenting a very singular appearance, and producing no other inconvenience than that of becoming sometimes entangled in the hair. Several medical gentlemen had, during its growth, visited this woman, and proposed its excision, but a great natural aversion existed in her mind to any operation. She at last, however, consented, through the entreaties of her husband and friends. Its removal was accomplished by Mr. Primrose, of Wrentham, and myself, by means of a metacarpal saw. The excrescence was easily divided, scarcely

producing any pain. A minute quantity of blood exuded from the divided surfaces, sufficient to demonstrate a vascular organization, the vessels entering from the scalp. It measured, when detached, eight inches and a half, approximating to the figure of a ram's horn. Its texture was hard and laminated, and it was of an albumino-gelatinous quality. A fragment, when submitted to the action of heat, eliminated the same strong odor as that produced by the same agency upon horn. Henry Collins, Esq., who has been long engaged in the pursuit of comparative anatomy, kindly assisted me in the analysis, and perfectly coincided with me in ascribing to it all those physical qualities which are usually met with in substances of a horny nature.

CASE VII. *A large human horn (ichthyosis cornea) attached to the occiput of a woman; spontaneous separation.* By Charles A. Dalby, Esq., Surgeon. *Lancet*, 1850, vol. ii.

In May, 1847, I was consulted by Mrs. P——, aged seventy, small in stature, and a martyr to rheumatism. She told me she had "a horn at the back of the head," which she wished me to see. On examination I found it to be a fine specimen of ichthyosis cornea, firm and horny in texture, of a brownish color, and measuring six inches in length, and two and a half in circumference.

Three years previously to this date (May, 1847), Mrs. P—— perceived an enlargement on the occiput, which proved to be an encysted tumor, and, as it appears, formed the base of this excrescence. From that period to the time I saw her, the growth was very gradual, but attended with great pain; so severe was it, that for months she could not be induced to lay her head on the pillow. This continued for five or six weeks longer, when a spontaneous separation took place, leaving a small round opening in the scalp, unattended with any discharge, and which appeared to be gradually closing. Two months, however, had scarcely elapsed, when a new growth was perceived, which slowly increased to about half the size of the former one, and fell off in April last in the same way. This last formation presents (with the exception of being smaller) much the same appearances as the other; its growth, however, was unattended with pain.

I visited my patient yesterday (August 27), and found only a small cicatrix remaining. I should observe that Mrs. P—— in each case was frequently urged to have the excrescence removed, and the secreting surface destroyed, to effect a more speedy recovery, but always objected.

CASE VIII. *Horny protuberance on the head of an aged female; removal by ligature; death from erysipelas.* *Lancet*, 1851.

M. Grisolle presented some time ago, to the Academy of Medicine of Paris, a horn which had grown on the left parietal bone of an old woman. It weighed three drachms, was five inches long, ended spirally, and equalled the little finger in thickness. The patient was seventy years old, and very fat; at forty the horn began to grow, but she used to pull it off when it had reached the length of one inch. Fifteen or sixteen of these growths thus followed each other; the present one took three years to attain its size, and the patient submitted to its removal by the ligature, from which operation she had erysipelas, and died. The *autopsy* proved that the horn had no connection with the bone; it was attached to the dermis by a kind of fibrous band. Around this, five or six sebaceous follicles were seen, of the size of a pin's head, but the most minute examination by Messrs. Grisolle

and Lebert could not elicit that the growth sprang from a sebaceous follicle, as might have been suspected, according to the opinions of Sir Everard Home and Sir Astley Cooper.

CASE IX. *Extirpation of a horn, from eight to nine inches in length, from the forehead of a woman aged eighty two years.* By Dr. Souberbielle, of Paris. American Journal Med. Sciences, 1851.

Madame Dimanche, widow, aged eighty-two years, laundress, living in the rue de Berey, Faubourg St. Antoine, noticed, six years since, a small wart upon the forehead, just above the right eyebrow. This excrecence gradually became elongated and enlarged at its base, the skin over its summit having a dry, earthy appearance. As this vegetation developed, it presented a corneous appearance, and at the end of six years from the time it was first observed it presented the appearance of a ram's horn, being at least twenty-five centimetres in length, from three to five centimetres in diameter, and curved in its lower two-fifths, having a blackish-brown aspect, being deeply striated lengthwise, and of considerable weight. Its tissue was dry and brittle. One of the members of the Royal Academy of Medicine, in handling it with too little care, broke off its point, the interior appearing solid, compact, and its tissue corneous.

The base of the horn was implanted in the skin of the forehead, which there presented a small circular neck, the tumor having nothing in common with the frontal bone. This circumstance rendered the weight of the horn extremely fatiguing to the patient, who, to obviate this inconvenience, had constructed a linen case, in the form of the tumor, which was enclosed within it, the base of the sheath being fastened to her night-cap band.

I performed the operation of extirpation by making a circular incision around the base of the tumor, and raising from it the portion of skin adherent to it. There was no arterial hemorrhage. I covered the wound with a bit of agaric and it healed readily, almost without supuration.

A curious fact in connection with this case is that this patient had previously had a tumor of the same nature just above the thumb, which was removed by Dr. P——. She had also at the time of the last operation an excrecence from four to five centimetres in diameter, and of the length of the little finger, attached to one of the cheeks by a narrow pedicle, and which she removed herself.

CASE X. *A horn with three branches, measuring fourteen inches in circumference, on the head of a man.* Lancet, 1825, vol. vii.-viii.

Paul Rodriquez, of Messico, a tall and athletic man, was in the habit of wearing a large cap of a peculiar figure, in order to conceal a tumor which projected from the side of his head, and which had at last reached an extraordinary size. Being at work in a warehouse, he was desired one day to assist in lifting a barrel of sugar into a cart; the barrel slipped back a little and struck Rodriquez with such violence on his concealed horns, that he fell upon the pavement insensible. In this state he was conveyed to the hospital of St. Andrew, which afforded the surgeons an opportunity of examining accurately these curious growths. A horny projection was found growing from the right anterior part of the head, measuring *fourteen inches* in circumference; and about one inch from its base it divided into *three branches*, two large and one small. The central horn, which was the largest, was curved and descended many inches below the ear, and then turned forwards upon the cheek. The smallest excrecence of the three was situated just in front of

the large one, and passed down on the cheek, just behind the external angle of the eye, as far as the middle of the superior maxillary bone, and was about three inches in length. Its extremity was separated about an inch from the curved termination of the middle horn, so that a considerable portion of the cheek, of a semicircular figure, was left between these two excrescences. The middle excrescence was very much the shape of a *ram's horn*, and had circular depressions and elevations marking the progress of its growth, just as the rings are seen on the horn of a ram, and it exhaled an odor exactly like the horn of that animal.

The violence with which the blow had been inflicted had broken off the lower extremity of the posterior horn, and had smashed its structure still higher up, so that its cavity was filled with blood. This singular excrescence did not adhere to the bones of the head, but appeared to grow from a cyst in the scalp, the sides of which were very thick, and lined with a smooth membrane.

CASE XI. *Human horn between the shoulders.* Lancet, 1830, vol. xviii.

This phenomenon was observed by Dr. Pensa in a man 80 years of age, who had a horny excrescence between the shoulders; it was movable, and adhered to the skin only; its substance was very hard, similar to that of the nails, and semi-transparent.

Human Horns. Report on the subject to l'Academie de Médecine de France. Archives Générales de Médecine—North American Med. and Surg. Journal, 1831.

On the 2d of March, 1830, M. Logés read to the French Academy of Medicine an account of some horns, and at a sitting of July 13, M. Ville-neuve, in the name of the committee appointed for that purpose, read a report upon his paper. The committee has added to M. Logés's case seventy-one others, collected from various authors, to wit: thirty-one in men, thirty-seven in women, and three in young children. The horns were situated, in nine instances upon the head, in fourteen upon the forehead, and in twelve on the thigh: in other instances three were found on the temple, five on the nose, two on the cheek, one on the jaw, four on the breast, four on the back, three on the penis and glans, one on the ischium, two on the knee and ham, one on the leg, and two on the feet and heel. The committee also cites from Bonnet, the case of a girl, who at three years of age had horns growing from every part of her body, so that at her thirteenth year, she was quite covered with them. Some of the horns were twisted like rams' horns; when they fell off, others grew in their places; there was one horn three inches in length, at the end of each finger. The committee also agree in opinion with M. Breschet, that the skin and mucous membranes are the only tissues of the body capable of developing horns, and that the cartilaginous transformations, frequently met with upon the liver, spleen and lungs, should not be regarded as such.

Statistics of human horns, with additional cases to those above enumerated. Chelius's Surgery by South, vol. iii.

Erasmus Wilson has given an interesting statistical account of horns which have grown on the human body, having "succeeded in obtaining ninety cases; of which forty-four were females, and thirty-nine males; of the remainder the sex is not mentioned. Of this number forty-eight were seated on the head, four on the face, four on the nose, eleven on the thigh, three on the leg and foot, six on the back, five on the glans penis, and nine on the trunk of the body. The greater frequency of this disorder among females than

males is admitted by all authors ; but this fact is most conspicuously shown in the instance of the thigh and of the head ; for example, of the eleven cases of horny growth from the thigh, two only were males ; and of the forty-eight affecting the head, twenty-seven occurred in females, and nineteen in males ; in the remaining two the sex being unmentioned. That old age is a predisposing cause of this affection, is proved by the greater frequency of its occurrence in elderly persons ; thus, of forty-eight cases in which the scalp was the seat of the growth, thirty-eight were above the mid-period of life ; several were over seventy, and one was ninety-seven ; three were young persons, and three infants."

In the Museum at St. Thomas's Hospital there are three examples of horns from the human body, two of which are those referred to by Astley Cooper ; the larger one is about ten inches long, with a base an inch in diameter, and tapering towards the tip ; it grew on the upper part of a man's head, and was removed, together with its root, by Dr. Roots, of Kingston-on-Thames (see page 734). The other horn, which Astley Cooper speaks of, was from the pubes, about an inch in length, conical, and three quarters broad at its base and of an oval shape. The third case was a patient of my own, who had two of these horns growing from the left side of the serotum ; one rather larger than the other, about the size of the little finger, and two-thirds of its length ; one dropped off whilst he was in the house, leaving a sore surface ; and I intended removing the other, but he took fright when it was proposed to him, and went away. The Museum of the Pathological Society of Dublin possesses two horns of considerable size, which grew for six years on the upper lip of a man about sixty years of age, and were removed by Pierce.

CASE XII. *Horn on the glans penis three and a quarter inches in length ; excision.* By P. A. Jewett, M. D., of New Haven, Connecticut. New York Medical Times, 1853.

O. P. H.—d, aged about twenty-two years, was admitted into the Hospital at New Haven, August 2, 1846. He was suffering from phymosis, which had existed from childhood. A few days after his admission, the usual operation for the relief of the difficulty was performed. The wound healed well, and he was discharged, "cured." On the 13th of November, 1846, he again applied for admission to the Hospital. He was suffering at this time from extensive warty excreescences, growing from the cicatrix caused by the operation for phymosis. These were treated, for several weeks, by a variety of applications of a caustic nature, and the administration of active constitutional remedies, on the supposition that they might be of a syphilitic origin, but without benefit. All other remedies having failed, the warts were removed by the knife. The wound healed well in a few days, and he was again discharged "cured." During the summer of 1848, as he informed me, the warts appeared again, and were removed at one of the hospitals in New York. The wound healed kindly as before, and he was discharged. At the end of some three months from the time of his discharge from the hospital in New York, he again presented himself at the Hospital in New Haven. According to his statement of his case, a few weeks after leaving the New York Hospital, he noticed a small hard tumor on the glans penis, unattended with pain, but subject to paroxysms of intense itching. The tumor continued gradually to increase, up to the time of his admission into the Hospital (December 5, 1848). At this time, it presented all the external appearances of a horn. It was of a light brown color, lamellated, could be handled and cut without occasioning pain, and when burnt, emitted the peculiar odor of horn.

It measured *three and a quarter inches in length*, and three-quarters of an inch in diameter at the base, gradually tapering to a point. It was situated on the left side of the glans penis, and not connected immediately with the cicatrix. He was in the habit of amusing the inmates of his ward by lighting the end of the horn, and allowing it to burn. The only inconvenience he suffered was from its size and situation. At his request, the horn was removed by a simple incision, including the base of the horn, and a portion of the glans penis. It is now four years since the operation, and there has been no return of the disease, but the organ remains perfectly healthy.

CASE XIII. *A horny tumor removed from the lower lip.* London Pathological Society. Dublin Med. Press, 1855.

Mr. Gray next exhibited a horny tumor, removed from the lower lip of a man seventy years of age. It was situated a little to one side of the median line. It existed for several years without making any progress; but had latterly grown fast. At the time of its removal there was scarcely any bleeding; but a few hours afterwards most alarming hemorrhage came on, which was with great difficulty restrained. The man, however, recovered, and lived for some time afterwards. It was difficult to trace its origin to any exciting cause. The patient was a temperate man, and not addicted to smoking; nor was Mr. Gray aware of his having any habit of biting his lip, or irritating it in any way, so as to account for the singular production. The tumor was rather more than an inch in length, and one inch and a half in circumference at its broadest part. Its consistence was dense and firm, and, to all external appearance, like horn; its color of a light brownish tinge externally. Its shape was not unlike that of the claw of an animal, being slightly curved, narrow, and pointed at its distal extremity; broad and thick at its attached portion. The base of the growth was imbedded in a thick capsule, formed of condensed muscular fibre and areolar tissue. On making a longitudinal section from the base to the apex, the tumor presented a striated appearance; the striæ running in the long axis of the growth. It also appeared from that section to consist of two parts, an upper and lower; the lower portion was of an opaque white color, and consisted of that part contained in the capsule at the base of the tumor which was mentioned before. It consisted of a mass of epithelial scales, arranged in longitudinal lamellæ, giving to the tumor the striated appearance which it presented on a section. The epithelium was of the spheroidal form, each particle containing a distinct nucleus. The upper portion of the tumor was of a deep brownish tinge, but also distinctly striated. This part had evidently been the part of the growth exposed to the action of the air; it was also firmer and more condensed in texture. The sections examined by the microscope presented the appearance of a homogeneous granular membrane, faintly striated in texture.

The President—Had you an opportunity of examining it soon after its removal?

Mr. Gray.—No; it was removed two years before I got it, and I did not examine it for two months after.

President.—Did you make out from the history if there was any swelling where this apparent horny growth was?

Mr. Gray believed that there was no swelling of any sort before the horn began to grow.

CASE XIV. *A horn, nine inches in length and two and a half in circumference, growing from the neck of an aged woman; excision.* Lancet, 1827, vol. xii.

Dr. Palmer, of Arbroath, has presented, through Mr. Duncan (whose zeal in the cause of pathological science has procured for the museum of this hospital many excellent specimens of disease), a valuable preparation of a horny excrescence, with the following account of this curious case:—

The woman who was the subject of it is about 60 years of age. Ten years ago she observed, without being able to account for it, a warty excrescence, of small size and not very hard texture, in the integuments covering the spinous process of the second cervical vertebra. This, unattended by pain, gradually enlarged, and as it was developed, it slowly assumed a horny consistence. It finally became of such a size, both in length and diameter, as to produce much inconvenience. She therefore was under the necessity of curtailing its exuberant growth by means of paring, an operation which for many years she had been in the constant habit of performing. Of late, however, she allowed it to grow, when it soon rapidly increased, so as to measure nine inches in length, and two and a half in circumference.

Dr. Palmer recommended the removal of it from the root, which was agreed to. It was found to originate almost entirely from the cuticle, and had very little connection with the cutis vera, which was, however, a little thickened, and presented a more vascular appearance than in its natural condition. The excrescence had the structure and form of a ram's horn. No reproduction of the disease took place subsequent to its complete removal.

SECTION XIII.

REMARKABLE SUDDEN DEATHS.

CASE I. *Sudden death, during the operation for popliteal aneurism, from the bursting of an aneurism of the aorta within the pericardium.* By Mr. James Vose, of London. New York Med. Repository, vol. xii., 1809.

I assisted Mr. Cooper at an operation for *popliteal aneurism* on Friday, the 7th instant, which was attended by a most extraordinary event. I led the patient from his ward into the theatre, and did not observe that he betrayed the slightest agitation: he got upon the operation-table without assistance, and composedly placed himself in the posture required. Mr. Cooper proceeding to the operation, laid bare the sartorius muscle, and by his incision exposed the saphena vein, at the same time wounding a small branch of it, which I compressed with my finger before it had discharged two drachms of blood. He was employed in dividing the strong fascia which covers the femoral artery, etc., while I held aside the sartorius, when a hollow groan from the patient, and a sudden convulsive extension of his limbs, induced me to turn from the operation and examine his countenance. His face had become of a leaden color, his respiration had ceased, and his pulse could not be distinguished. Mr. Cooper, and I believe most present, at first thought he had fainted from excessive fear. A few deep and struggling inspirations, which the patient fetched after the lapse of some minutes, were considered as signs of returning life, and every means employed to second them; his lungs were inflated, and his jugular vein appearing turgid was opened; but every effort to restore him proved ineffectual: the intervals between his labored inspirations became longer, and he expired in less than ten minutes from the commencement of the operation.

I might now amuse you by the variety of conjectures which were hazarded

on the immediate cause of this poor man's death, but perhaps you are fortunate that my paper will not admit it. The prevailing and most reasonable opinions were that he had fallen a victim to fear, or an epileptic fit, his first struggles being supposed by some to resemble a violent paroxysm of the latter. *Mr. Cooper espoused the side of fear.* But the doctors were all struck dumb, when we next day, on examining the body in their presence, found the pericardium containing a great coagulum of dark-colored blood, which was moulded to the exact shape of the heart, and surrounded it to the thickness of an inch and a half. An *aneurism of the aorta* was found within the pericardium, and just above the semilunar valves; it was about the size of a black walnut, and communicated with the channel of the artery by a much larger circle than usually exists in aneurisms of similar dimensions. The sac adhered to the superior cava at one point, and had given way at its posterior part. The whole aorta was diseased, and a small *aneurism* formed in the *abdomen*; the preparation of which Mr. Cooper presented to my friend Mr. Charles Bell. The brain and abdominal viscera were natural and healthy, and the lacteals and thoracic duct (which I have preserved) were filled with chyle. The aneurism in the ham had existed but a few months; when Mr. Cooper took it out, the blood was fluid, and the surrounding parts uninjured. The patient was operated on the morning he came into the hospital.

CASE II. *Death apparently from fear, during the operation for aneurism of the femoral artery.* Lancet, 1823, vol. i.

A man of color, of middle age, rather above the common stature, robust, and apparently in good health, was received into the London Hospital, laboring under a moderate-sized *aneurism of the femoral artery*. An operation was proposed to him, to which he readily assented. On entering the theatre, however, he fainted; some wine and water was given to him, which he distinctly swallowed, and the operation was proceeded with, the artery exposed, and the ligature applied, but not tightened. During the operation, it was observed that no pulsation could be felt in the tumor, but this was accounted for by the fainting. Before tightening the ligature, it was suggested by the operator to wait until the pulsation was re-established. Some increased attention was then paid to arouse the dormant energies of the patient; and it was remarked that the syncope had continued an unusual time. After the attempts had been some time persevered in, a more attentive observation proved that he was quite dead. All the usual resuscitative means were tried, but without effect. On dissection, both sides of the heart were found empty, and the lungs tinged with blood: no other particular appearance was observable.

CASE III. *Rupture of an aneurism of the abdominal aorta. Did the aneurism or the blow of the wife kill the actor, Ewing, in the Mobile Theatre?* American Journal Med. Sciences, 1843.

The deceased was an actor by profession, aged about 25 years, and of intemperate habits. On the night of the 25th of March, while playing his part at the theatre, he and his wife came off together from the stage, and while doing so, she asked him why he had not been home that day. He replied, that it was none of her business, and at the same time struck her with his fist or hand, and knocked her against the scene. Ewing then left to go down stairs, and his wife followed him. In a very few minutes thereafter, two witnesses deposed that they met her at the foot of the stairs, holding a weapon of some sort in her hand, and exclaiming that she had killed him. The deceased

was found lying across the threshold of the dressing-room, speechless, with two wounds in his right arm.

He was proved to have enjoyed good health for several years, and to have played parts which required great physical exertion. It was also stated that he frequently engaged in billiards and ninepins, and never complained of fatigue or difficulty of respiration. For the prosecution, Dr. Kelly deposed, that on being sent for he found Ewing dead. There were two wounds upon the right arm, by which the basilic vein was cut in two places—these wounds were near the olecranon and superficial, upon the inner and lower side of the arm. There was another wound upon the left side of the body, between the false ribs and the iliac region, obliquely and upwards. Dr. Kelly did not attend the dissection, but upon introducing a probe into the wound he found that the dagger had penetrated at least two or three inches in the direction of the stomach and spleen. He could not say whether the deceased came to his death by the wounds received. He did not observe any arterial blood issuing from the wound.

For the defence, it was proved that Ewing was quite excited that evening, but not so as to interfere with his business—that after the wound had been inflicted, his wife exclaimed, “why have you struck me?” and repeatedly implored forgiveness. It would also seem that the dagger she wore was appropriate to the part which she was acting.

Dr. Levert examined the body, and at first supposed that the wounds were the cause of his death. The following appearances were observed: The abdomen was full and much distended; two slight wounds in the right forearm, and a slight wound apparently in the left hypochondriac region. There was no hemorrhage from this wound, but upon moving its lips with the finger and thumb, a small quantity of dark-colored blood was seen to issue from it. On opening the abdomen, its whole cavity was found filled with blood, which had evidently caused the distention noticed above. Dr. Levert's first impression was, that some important bloodvessel had been opened by the knife with which he had been stabbed, but upon tracing the wound with great care, he soon ascertained that no vessel of any size had been touched. The knife had entered the left hypochondriac region, just under the margin of the false ribs, its direction was a little upwards and inwards, it passed through the mesocolon, near to the gut, but without wounding it, and into the cavity of the stomach near its large extremity. It entered the cavity of the stomach without passing through its opposite side, and the wound was small, being made merely by the point of the instrument.

Dr. Levert remarks, that as there was no bloodvessel of sufficient importance injured in the track of the wound to account for the sudden death, or for the immense quantity of blood found in the abdominal cavity, he came to the conclusion that some cause, other than the wound with the knife, must have produced the fatal result in so short a time. After sponging the blood from the abdomen, he discovered a large *aneurismal tumor*, which occupied and almost entirely filled the right iliac fossa. This aneurism had been ruptured at a point below and to the right of the duodenum. It was thus one of the descending aorta, and, from the large quantity of fibrinous matter which it contained and the very attenuated condition of its parietes, of long standing; the witness hence came to the conclusion that as the knife had not passed near the aneurism, its rupture must have been caused by his high state of mental excitement, increased by the spirits which he had taken, and on the trial his testimony was to that effect.

The jury, after an absence of about ten minutes, returned a verdict of not guilty.

CASE IV. *Assassination of the celebrated surgeon Delpech.* British and Foreign Med.-Chir. Review, 1833.

On the 29th of October, a ruffian by the name of Demptos ran towards Delpech's cabriolet with a double-barreled gun in his hand. He fired, and the ball entered the left side of the chest; he fired a second time, and killed the servant on the spot. Delpech died in a few minutes. The assassin was a native of Bordeaux, and aged thirty-six. He had some time before applied to M. Delpech on account of a varicocele, which, by proper treatment, was speedily benefited. He returned from Montpellier to Bordeaux, and there fell in love with a girl, whose parents, however, refused their consent. On being urged, however, to explain their reasons, they admitted that M. Delpech had been consulted by them, and that his opinion was not a favorable one. Demptos, forthwith, repaired to Montpellier, resolved either to force a retraction from Delpech of what he had said, or to assassinate him. On the evening before the murder, Delpech was in the theatre along with his son; Demptos went up to him, and demanded a letter which might confute the opinion given to the parents of the girl; the professor refused to comply; and the villain left him with threats of revenge.

CASE V. *Death by falling from the clouds.* Lancet, 1837, vol. xxxii.

The following is an account of the *post-mortem examination* of the body of Mr. Robert Cocking, aged sixty-one, who fell with a suicidal machine called a parachute, from the cord of a balloon which ascended from Vauxhall Gardens, on the 24th of July, 1837. The height which the balloon had reached when the parachute commenced its descent, is stated to have been 5000 feet. The instrument of death was simply a canvas toy, constructed in ignorance, and used with the hardihood which might distinguish an unfortunate being who contemplated his own destruction by extraordinary and wonder-exciting means—an end which, without the motive, was more effectually attained, by the crushing of the parachute in the air as it dropped:—

On the right side.—The second, third, fourth, and fifth ribs broken near their junctions with their cartilages. The second, fourth, fifth, and sixth broken also near their junctions with the vertebræ. The second, fourth, fifth, and sixth ribs also broken at their greatest convexities.

On the left side.—The second, third, fourth, and sixth ribs also broken near their cartilages, and also near their angles.

The clavicle on the right side fractured at the junction of the external with the middle third.

The second lumbar vertebra fractured through its body; the transverse processes of several of the lumbar vertebræ broken.

Comminuted fracture and separation of the bones of the pelvis at the sacro-iliac-symphyses.

The ossa nasi fractured.

The right ankle dislocated inwards; the astragalus and os calcis fractured.

The viscera of the head, chest, and abdomen free from any morbid appearances.

F. C. FINCH, C. MACILWAIN, W. MAUGHAM, T. GREENWOOD, W. THOMPSON, Surgeons.

Mr. Finch, and the other surgeons at the inquest, agreed in the opinion as to the cause of the deceased's death, namely, the injuries he received in the concussion by the fall on the earth. The spinal marrow was likewise very greatly damaged. Mr. Finch also was of opinion from the nature of some of the injuries, that the deceased had fallen on his feet. In addition to the ribs mentioned as having been broken, there was another, the eleventh rib on the

left side, which by some mistake had been left out of the above paper. The hip-joints appeared not to have suffered any injury.

CASE VI. *Sudden death from a slight blow upon the pit of the stomach.* From Mr. Aston Key's Lectures in the Lancet, 1840, vol. xxxix.

Sir Astley Cooper used to state a case which came to his knowledge, though he was not an eye-witness to the occurrence. Two men were working near the East India House, one of whom had a heavy load which he was wheeling along; his comrade said to him, "That is too much for you, stand aside and let a better man take it." He accompanied this with a slight blow on the scrobiculus cordis, and the man immediately let the barrow fall from his arms. He felt a severe shock; the sudden impulse made so strong an impression upon the heart's action as to stop it, and without complaining of pain the man died on the spot.

CASE VII. *Accidental Hanging.* Lancet, 1840, vol. xxxix.

Sir :—The circumstances which accompanied the sad fate of this unfortunate man are not without their interest.

Let me first adduce the principal evidence given on the inquest. Samuel Rutherford, police constable, No. 7 F, deposed as follows: About half past two on the afternoon of Monday I was passing down the Strand, when I saw a large number of persons going towards Waterloo bridge. After waiting there a few minutes, I saw the deceased, Scott, come on to the bridge with the rope I now produce, tied across his shoulders in the form of braces. (The rope was here produced, and appeared to be a common hempen rope, about a third of an inch thick.) He stood on the bridge for about a minute, when he ascended a scaffold erected over the second arch, consisting of five poles, two upright and three crosswise. It was the second arch from the Somerset-house side. On ascending the scaffold he went from one side of the poles to the other, for the purpose of trying if they were safe, and shook them. He then ascended the left-hand pole, at which time he had the handkerchief I now produce on his head. There were several thousand persons present on and near the bridge at the time. On ascending the left-hand pole, he tied the handkerchief round it, and formed a sort of flag; he then came down on to the cross-pole, and shook his head at the ice and water below, and appeared to smile; he had no ladder, but climbed from one pole to the other; I should say the height of the top cross-pole was about twenty feet from the bridge: he then tied the rope round one of the cross-poles, and made a noose, not a slip-noose, and tied it to the upper cross-pole; the poles appeared to be placed in such a manner as to allow him to put his feet on one pole to prevent him slipping; he then took hold of the rope in his right hand, and jumped, as if he was going into the water, but by the main strength of his arm, he threw himself back on to the middle pole again; he then opened the noose of the rope, and put his hands across the top pole, raised himself to the level of the pole, placed his feet in the noose, and hung with his head downwards. After hanging in that way about half a minute, he pulled himself up again to the top pole, and unloosed the noose; he then again took the rope from the pole, and made a noose which would slip, and placed it around his neck; he then took hold of the top of the rope with his hand, and, having released his feet from the second pole, let himself gently down to the extremity of the rope; the knot of the rope was placed on the right-hand side of the deceased's head, and to let himself down, he put his hands above his head until he became suspended; he appeared to me to be showing the public the symptoms and convulsions of a hanging man; he merely shrugged his

shoulders, but did not put his hands up; after hanging between five and six minutes, some of the mob standing by said the man was dead; several persons attempted to get up, and they were laughed at. Inspector Musgrove, who was on the spot, insisted upon having deceased taken down: the persons said, "Oh, he has hung before longer than this: the inspector, however, insisted, and upon his doing so, 39 F and other persons rushed up to the scaffold. A ladder was procured from the toll-house, and in about half a minute after, he was got down; when he was got down his tongue was just protruding through his teeth, and when I took the noose off it went back; his eyes were partly open, and his face was very black; the cord was quite round his neck, and I had great difficulty to unloose it.

No doubt the usual plan adopted by poor Scott was to suspend himself in a noose, the principal pressure of which was applied to the nape of the neck, extending to its sides, without compressing the jugulars or the trachea; the circulation within the brain and the respiration would, therefore, not be arrested.

But on the day of the fatal accident the noose, doubtless, slipped, and the course of the jugulars and trachea was interrupted.

The circumstance which is interesting to the physiologist, and (may I not say?) to the philanthropist, is, that the moment the cord was tightened, the moment the jugulars (how well were these vessels named!) were compressed, apoplexy took place, with total loss of consciousness! Not the slightest attempt was made by the unfortunate man to recover his hold on the cord to save himself.

Other facts have led to the same conclusions. On one occasion a youth, aged eighteen, impressed with the idea of the sufferings to be endured on the occasion of an approaching execution, arranged a cord so that he could press the anterior part of the neck upon it with the weight of the body. His object was, no doubt, to ascertain the kind and degree of suffering so induced; but he lost all sensation at the very moment, and was found in that position, dead.

I once saw a dog strangled by means of a cord tied with extreme tightness round the neck. I expected to witness great struggles; there were none. There was not a movement until after some seconds, when convulsive efforts took place. A snake suspended by the neck, ceases to move that instant.

Now, if the deduction which I have drawn from these facts be just, may we not hope that the poor culprit suffers not an instant after suspension?

But might we not also save the sufferings of that part of the brute creation which is slaughtered for our food and sustenance, and thus spare them the pang of the knife, and the pain of dying? Let insensibility be first induced, by a tightened cord, applied so as to compress the jugular and other veins of the neck, and then let the large vessels be divided as at present. I am, sir, your obedient servant.

MISERICORS.

London, Jan. 14, 1841.

Post-mortem appearances of Scott the diver.—Dr. Chowne was requested to state the appearances observed in Scott, the diver, after death. It appeared that nearly half an hour had elapsed from the time he was first suspended till he was brought into the Charing-cross Hospital. It was generally thought that life had been some time extinct, but every means that could be resorted to were attempted and persevered in with unceasing diligence. Attempts were made to inflate the lungs; he was placed in a warm bath; subjected to electrical shocks; was rubbed, and stimulants introduced into his stomach, without any good effects, for an hour and a half.

The body was examined twenty-four hours after death. It was a perfect model of symmetry and strength. There was a mark on the skin, round the neck, which appeared to be the result of the pressure of the rope during life, rather than its post mortem effects. This mark was quite superficial, and did not extend to the cellular membrane. There was scarcely any mark over the larynx; it passed up anterior to the ears. The brain presented nothing at all unusual, except that it was somewhat congested at its posterior part; the spine was healthy and sound; the lungs were very much congested; and the heart and large vessels were full of fluid blood; the lining membrane of the air-passages was particularly congested.

It was quite evident that death was the result of asphyxia, as in common cases of hanging. It appears that the poor man was in the habit of suspending himself entirely by the lower jaw, the rope having been fixed by a "bowling knot" above the head, resting on the under surface of the lower jaw, about half way between its symphysis and its articulation. In the last attempt it is remarkable that the knot was a slip-knot, and not a bowling one; and it is supposed that the accident was dependent partly upon this cause. He was quite sober at the time.

CASES VIII. and IX. *Sudden death from a blow on the jugular vein.* Lancet, 1845, vol. i.

1. That death may occur immediately, or in the course of a few hours, from a blow on the neck over the jugular vein is an undoubted fact. The following case, which occurred at Portsmouth, in September last, is a practical illustration of the operation of this cause of death: An inquest was recently held at the Bridge Tavern, by Mr. W. Cooper, the coroner for Portsmouth, on the body of a woman, aged 50, named Harriet Hill, who came by her death under the following circumstances: It appears that the deceased was a married woman, residing at a low public-house, situate in Tower Street, Portsmouth. She had of late taken up with the prisoner, Thomas Matthew Tucker, a young man, aged about 20. The deceased and Tucker went out on the Friday, and were returning home in the evening down Broad Street, quarrelling. The woman was suddenly observed to be struck by some one, and was seen to run into the road and drop, screaming. She was immediately taken up by some lookers-on and conveyed to her lodgings, but she never spoke more, and expired on the following evening. Suspicion fell upon the prisoner, Tucker, who was immediately apprehended and lodged in jail. The inquiry was a very protracted one; eventually, however, the jury, having no doubt upon their minds but that the prisoner was the man who administered the deadly stroke, delivered a verdict of "Manslaughter against Thomas Matthew Tucker." The prisoner was removed to jail. The surgeon who examined the body pronounced it to be that of a person of very healthy constitution, although so far advanced in years, none of the usual signs of an irregular mode of life being visible, the whole system and brain (with the exception of an effusion of blood, caused by the blow) being in a most healthy and sound condition. The blow took effect upon the neck, on the jugular, and produced instant insensibility, and eventually death.

2. As an additional example of this form of sudden death, we may mention the following case, which was furnished to us by a gentleman occupying a high position in the medical staff of the East India Company's Service: Two fine healthy young men, in one of the company's European regiments, were sparring for amusement, when one hit the other a heavy blow on the side of the neck, over the jugular vein. The young man thus struck dropped down and died instantly. On a *post-mortem examination* being made, a large

quantity of effused blood was found in the lateral ventricles, as also in the fourth ventricle.

CASE X. *Singular death from opening the temporal artery.* Lancet, 1852.

Mr. Douglass, a barrister of the Middle Temple, aged 58, was on Christmas morning found dead in his chambers, Garden Court, Middle Temple, through the loss of blood from a wound in his head inflicted by his falling against the small key of his book-case. Mr. Hutchinson, of Chancery Lane, who examined the body, said that if he had had timely assistance, the hemorrhage could have been stopped, and his life saved. Deceased, who was subject to apoplectic attacks, fell, it is supposed, during one of those seizures, with his head against the key, which opened the left temporal artery. He was heard to fall at 7 A. M., and found dead at 9 the same morning.

CASE XI. *Sudden death during parturition from rupture of the pulmonary artery.* Dublin Medical Press, 1853.

M. H——, aged 36, was brought in a car to the Macroom Union Infirmary on the 3d inst. She stated that she was in labor of her sixth child; that her illness commenced two days previously, while travelling to join her husband, who had obtained employment in a distant part of the country; that she had not expected her confinement for another month; that she had been received into a farmer's house and kindly treated. Whilst answering my questions she had a sharp pain, and, on examination, I found the os dilated to the size of a crown-piece, and very soft and yielding, a bag of membranes presenting, but no part of the fetus within reach. I should have conceived her to be not more than six hours in labor were it not for her own statements, corroborated by the woman who accompanied her, to the effect that she had suffered occasional strong labor pains for forty-eight hours previously. She was a remarkably handsome, well-formed woman. Her circulation and respiration were good, and all the symptoms seemed to promise a safe if not a speedy delivery. I ordered a domestic enema, and left her in charge of a careful, intelligent nurse-tender, with directions to send for me when her labor was more advanced. In exactly an hour after, I was hastily summoned, and was at her bedside in ten minutes, but found that she had expired in a few seconds after the message was sent to me. The nurse informed me that she had not left her for an instant; that her pains had not altered, either in character or frequency, until within a few minutes of the fatal termination; that then, during a strong pain, a small quantity of liquor amnii was discharged; that shortly after, a powerful expulsive effort followed, during which her face and neck became very livid; that, when the pain ceased, she complained that her heart was leaving her; that her respiration became suffocative, and she died in a few minutes. Having satisfied myself by auscultation that the fetus was not living, I did not perform the Cæsarean section. I made a careful *post-mortem* examination in eighteen hours after. The body was well formed and moderately fat. The chest was very broad, and the mammary glands well developed. The face was pallid, and on the front of the neck there was considerable ecchymosis. The uterus was healthy; it contained a male fetus of about seven months, very much macerated; the breech presented low down in the pelvis; there was a turn of the cord round the neck. The placenta was very firmly attached to the upper and anterior part of the fundus, and the usual quantity of liquor amnii was present. All the abdominal viscera were perfectly healthy. On opening the cavity of the chest, I found a quantity of fluid blood and some coagula, and I soon traced the source of it to be a rupture of the right pulmonary artery,

just where it passes beneath the arch of the aorta. The heart and lungs were healthy, and the ruptured vessel did not indicate any proof of disease or weakness. Here, then, was the cause of death; it was altogether a fortuitous accident which no treatment could have averted; yet had this case occurred in private practice, where a post-mortem examination was not obtainable, the attending surgeon would have found it very difficult to absolve himself from blame, and the occurrence might have produced an injurious influence upon his practice for years.

SECTION XIV.

MARVELLOUS CASES.

CASE I. *A woman delivered of five living children at the seventh month of utero-gestation.* British and Foreign Med.-Chir. Review, 1838.

In our number for February, 1838, an example of five children at a birth is recorded; and another is said to have occurred at Naples. The mother, who had previously had twelve children at ten accouchements, was taken with labor pains at the seventh month of utero-gestation, and brought forth successively, and by natural presentations, five living children, all of whom were baptized. The mother did not suffer anything extraordinary. Four of the children were females, and one male. The male infant was delivered first, and after a few minutes, one female, then, at intervals of fifteen minutes each, the other three followed. The infants much resembled each other, and were of regular form, and well grown, and were nearly the ordinary size of a seven months' fœtus; each weighed about three and a half pounds, and measured in length a French foot. The insertion of the umbilical cord was about four lines lower down than ordinarily. The placentas with their membranes were four instead of five; and each had its umbilical cord, except the fourth, which contained two in one large sac. The fœtuses, with their membranes, placentas, and umbilical cords, are preserved in the Royal Anatomical Museum of the University of Naples.

CASE II. *Five living children at a birth, at full time.* American Journal Medical Sciences, 1829, vol. iv.

A woman, twenty-seven years of age, who had been married five years, of middle stature and robust constitution, after having given birth to twins two years before, was put to bed with five children. The regular period of pregnancy was passed, and nothing in particular occurred, except that the woman felt herself more feeble than usual, with less inclination to eat or sleep. The abdomen had been very much distended, especially on the right side. The movements had been chiefly felt on the left side. The birth of the first child was very easy, and took place soon after the formation of the watery sac. The others came more slowly, and the last with much the most difficulty. Each was inclosed in a separate sac, and immediately followed by its particular placenta. All were born with the head presenting in the first position. The first that came were two boys, then a girl, next a boy, and then a second girl. Not one of them survived the third day. Their general length was from fifteen and a half to sixteen and a half inches. The second boy did not weigh two pounds after its death. Although all were regularly formed, they did not appear to have attained perfect maturity. With the boys, the umbilical cord was sixteen inches long, but only twelve with the girls; pulsation in it could scarcely be perceived at the moment of birth. The children had an old look; their voices were tremulous; they slept

continually, and their temperature was very low. The mother, although very feeble, soon regained her health.

CASE III. *A woman pregnant with five fœtuses, aborting at about the second month.* Lancet, 1840, vol. xxxvii.

Doctor Evory Kennedy produced five fœtuses, with their involucria, the product of a single abortion, at the meeting of the Dublin Pathological Society, held on the 14th inst. The patient had been attended by his late assistant, Dr. Thwaites, and pupils of the hospital, and the facts of her case were accurately noted, so that deception was impossible. The specimen produced Dr. Kennedy stated to be the multiparient conception of a female, who aborted when, as she stated, she was three months gone with child. The case was one in which there appeared to be three distinct ova; two of these were twins, the third was single, so that five fœtuses coexisted in utero. On examining the preparation, Dr. Kennedy remarked that, closely viewed, it would be found that those on each side differed from the centre one. Each of the former possessed a common placenta, and membranes common to both, with an intervening septum; but the central one is distinct and perfect in itself, having its own placenta and membranes. Some persons have been disposed to question the occurrence of these multiparous births; and, indeed, it must be acknowledged that the popular opinions, and even recorded cases, on the subject are sufficiently extravagant; as for instance, the Countess of Hanneberg's case, in which it was stated that 365 children were produced at a birth. But without taxing our credulity in these cases too far, we have undoubtedly a few well-authenticated instances on record, in which women have given birth to five children at a time. One of these, that of Guiseppa Califani, occurred lately at Naples; and we have the details of another, which took place in Franklin County, in America, about twelve years ago, recorded by Dr. Paddock. There is also said to be a similar preparation in the British Museum. It is extremely curious and interesting, as connected with the history of multiparous births, that in this respect Ireland preponderates over all other nations, and that the Irish females are unequalled in the ratio of their fecundity. The proportion of twin cases in Dublin is one in sixty; in America (where, it is to be recollected, there is a large number of Irish emigrants) the proportion is one in seventy-five; in London it is one in ninety-one; while in France, "*longo intervallo*," it is one in 140. In proof of the rarity of five twin children, Dr. Kennedy further remarked, that out of 140,000 cases recorded in the lying-in hospital of Dublin, there is no instance of five children at a birth. There is one case of four, but none of five. It is a curious fact, that in the American case the mother was an Irishwoman, and had recently arrived in America. It may, perhaps, be considered equally curious that in the case detailed by Dr. Kennedy, the father was a man of small stature, æt. about thirty, without any remarkable personal development, and by trade a *taylor*! The woman, the subject of the present memoir, whose name is Sarah Hickey, is twenty-eight years of age. She was married about two years ago, and within nine months after brought forth her first child. This conception was uniparient. After the lapse of six months she again conceived of the fœtuses alluded to; and observed that during the pregnancy she increased very rapidly in size, and suffered constantly from bearing down, which rendered walking or standing almost impossible. She had constant sickness of stomach—a symptom generally looked on as an evidence of compound pregnancy. As to the abortion, it would appear to have been produced by inordinate distention of the uterus for its period, which, in its turn, led to parturient efforts, as the ova presented no morbid

appearance. The fœtuses, which are all males, do not appear to exceed the development usually observed about the second month; and as Hickey menstruated on the 24th of May, and miscarried on the 26th of August, it is more than probable she over calculated the duration of her pregnancy. This preparation is in Doctor Kennedy's museum, in the Dublin Lying-in Hospital.

CASE IV. *Six living children at a birth.* American Journal Med. Sciences, 1833, vol. xii.

On the 30th of December, 1831, the wife of a man named Dernian Ploson, living in the village of Dropin, in Bessarabia, was delivered of six daughters, the fruits of one pregnancy, all living, and only a little smaller than the usual size of children at birth, with the exception of the last, which was much the least. The mother is not quite twenty years of age, and of a strong constitution. The whole six children lived long enough to be baptized, but died in the evening of the day of their birth. The mother suffered from a severe indisposition subsequent to her confinement, but is now quite well.

CASE V. *Birth of a petrified child by the Cæsarean section.* Lancet, 1831, vol. xx.

Among the other extraordinary events connected with the medical and surgical history of the sixteenth century, we have to record one which, were it not for the high authority on which it rests, might well be accounted incredible, and, even as it is, must be admitted to partake almost of the miraculous; so wholly at variance is it with all ordinary experience and preconceived opinions. This event is no other than the delivery of a woman residing at Sens, in Champagne, of a *petrified child*, which was taken from her by the Cæsarean operation, in the year 1582. This fact, paradoxical as it may appear, rests upon no less authority than that of Bartholine, Paré, Licetus, and others of the most unquestionable veracity, who strongly attest its truth. It was universally believed to have lain in the maternal uterus for twenty years before she had courage to undergo the only operation by which she could have been relieved from so unnatural a burthen, and after having been cut out, was carried from Sens to Paris, where it was purchased by a goldsmith from Venice, who sold it for a large sum to Frederick III., King of Denmark, by whom it was added to his collection of rarities, where it may perhaps yet be seen—at least it was in existence there not many years since. That it really is a human fœtus, and not an artificial preparation made to impose upon the credulous, is evident, as we are informed by those who have seen it, to the eye of any observer. Its upper part is found to be composed of a substance resembling gypsum; the lower part is said to be much harder, the thighs and posteriors being perfect stone, of a reddish color; its grain and surface perfectly resembling that of human calculi. How to account for this singular deviation from the ordinary laws of nature, in a clear, explicit, and philosophic manner, might be difficult, although not more so, perhaps, than to account for many other operations which are equally marvellous, but which, from falling more frequently under our observation, have ceased to be regarded with surprise. * * * * * We are, unfortunately, left in the dark as to the constitutional habits of the mother, but when we know a mode by which, although somewhat out of the common course of nature, the change from an organized to an inorganic substance is capable of being effected, we should only expose our ignorance by

denying or disputing a fact which rests for its support upon such authorities as Bartholine and Paré.

CASE VI. *Ejection by vomiting of a fœtus by a male child.* Lancet, 1834, vol. xxvii.

The Greek journal *Le Sother*, of August the 13th, contains a report of a case by M. Ardoin, a surgeon in the French marine, in which a fœtus was ejected during a fit of vomiting by a young child, resident in the island of Syra, named Demetrius Stamatelli. Dr. Ardoin, having been called to this child on the 19th of July, found him in a condition so desperate, with pains in the stomach and bowels, that, after in vain administering some remedies, he recommended the parents to have the sacrament administered on the morrow. The next day, as a last resort, he gave the patient an emeto-purgative. After the first vomitings a fresh fit supervened, of a more energetic nature than the others, when, with a violent throe, the child expelled a fœtus by the mouth. The fœtus had a sufficiently well-formed head, a little bent, and but one arm; instead of inferior extremities, there was a fleshy-membranous prolongation, thinned at its termination, and united to the placenta by a species of sheath which occupied the place of the umbilical cord. The development of this fœtus appeared to have been arrested between the fortieth and fiftieth days of its embryo existence. On the morning of the third day, the patient was much better, the morbid symptoms having diminished. The improvement has not since been interrupted. The report concludes with some observations to the following effect: Having carried the fœtus home, he there, in the presence of many medical men, amongst whom were MM. Milonas and Corco, minutely investigated its structure anatomically, and clearly found it to be a "human fœtus." Afterwards, having placed it in alcohol, medico-legal examinations were instituted before the proper authorities, for the purpose of obtaining full assurance whether or not the strange occurrence might not have been "the result of fraud or crime." Adverting to the similar cases related by Passau in Bavaria, Highmore in England, and Dupuytren in France, "the possibility of such occurrences," says Ardoin, "cannot be denied, and I consider it my duty to declare that this event, remarkable though it be, rests not under the slightest doubt, since the accompanying testimonies are too authentic for refutation."

CASE VII. *A man pregnant with his little brother; relieved by a kind of Cæsarean section.* By Professor Velpeau. Lancet, 1840, vol. xxxvii.

— Gallochat, of Esternay, 27 years of age, was admitted into the hospital of La Charité towards the middle of January last. On the right side of the scrotum there was a tumor as large as the fist; it was not easy to determine the nature of this tumor. Some regarded it as cancerous; others as fibrous; others, again, as tubercular. I could not coincide in any of these opinions. The tumor was congenital; free from pain on pressure, and had never caused any pain; the surrounding skin was not changed in appearance, the body of the tumor was elastic, and a string of hair projected from an ulcer on its posterior surface, which occasionally discharged a glairy fluid: I, therefore, concluded on the existence of a fœtal tumor or product analogous to that of conception.

Having obtained some further information from the medical man who had attended my patient in early life, and which confirmed me in my opinion, I determined on removing the tumor. Its examination enabled us to discover in the interior, almost all the elements of the body of a mammiferous animal. The external layer is evidently cutaneous, its substance being composed of

lamellæ resembling the areolar, adipose, fibrous and muscular tissues. In the interior we found two small cysts, containing a matter similar to the vitreous humor; another cyst, as large as a partridge's egg, which contained a greenish fluid like meconium. In a fourth sac was a mass surrounded by hair; and on examining this mass, under the microscope, it was found to present all the characters of sebaceous matter with epidermoid scales.

Finally, in the midst of the substances now described, we found numerous portions of the skeleton perfectly organized, and composed of true bones, not of accidental productions. The bones, which were inclosed in a species of periosteum, may be distinguished into three groups; the first is composed of three portions, which seem to represent the clavicle, scapula, and a part of the humerus; the second, much larger than the former, belongs either to the pelvis or the base of the cranium; the third group comprises portions of the vertebræ, or of bones which we cannot designate.

The different parts, then, which I have the honor of laying before the Academy, incontestably belong to a product of conception; but how are we to account for their existence? I do not find that a monstrosity, similar to the one now noticed, has been described by teratologists.

In monstrosities of inclusion, described by Dupuytren, St. Hilaire, and Olivier, one of the fœtal formations, absorbed by the other, has been constantly found, inclosed in a cyst, and existing as a foreign body. In the examples related by St. Donat, Prochaska, etc., of remains of a fœtus discovered in the scrotum, the tumors were always encysted, the bones necrosed, and the organic tissues destroyed by suppuration or decomposition. On the contrary, in my case the parts had continued to live; the tumor had a color, consistence and sensibility peculiar to it, and completely independent of the individual to whom it was attached. A well-marked line separated its integument from that of the scrotum. I pinched it, and pierced it with various instruments without causing the least sensation in the young man; he himself has often pierced it with a knife without causing any pain. Again, when we reflect that the tumor was as large as the fist, but was scarcely noticed by the surgeon who saw the child, at the age of four months; that it was at first mistaken for a pneumatocele, and then for a small phlegmonous abscess, it is difficult to conceive that it was as large at birth as when removed. A mass so considerable, in a child a few months old, would certainly have attracted attention; we should also remember that, according to the medical man's account, the tumor continued to grow up to the age of eighteen years; hence we are compelled to conclude that the portions of fœtus lived, were developed together with the individual, and that they were actually two individuals.

Did this state take place during intra-uterine life, or did the imperfect fœtus descend from the abdomen with the testicle, or was it generated in that portion of the body?

CASE VIII. Craniotomy, and then the Cæsarean section with safety to the infant, which survives. American Journal Med. Sciences, 1850.

In July, 1839, the author was called to a woman, æt. 34, in labor with her second child. Two years before she had been delivered of a still-born child by means of the forceps. He found that the labor had continued more than forty-eight hours, and that the practitioner already in attendance, after having in vain endeavored to deliver by the forceps, had perforated the cranium, and made ineffectual efforts at extraction. The woman was fatigued, but not exhausted, and Dr. Lagae fearing, owing to the height at which the head was situated, and to the narrowness and obliquity of the pelvis, that greater danger would result to the mother by continuing the attempts at extraction

than by performing the Cæsarean section, resorted to the latter. No difficulty attended its performance, the mother getting about in a few weeks, and living for eight years after. A feeble male infant, heaving some sighs, was delivered. There was a large wound in its cranium, situated to the right of the sagittal suture, and a few lines in front of the posterior fontanel. Through this the brain was visible, looking like a sanguinolent pulp, a small portion escaping by the wound, as did other portions after the suppurative process was set up. The child recovered; compresses, dipped in cold water, being alone applied to the part. It, now nine years old, was recently exhibited to the West Flanders Medical Society, a loss of substance equal to a two-franc piece in size being still observable in its cranium, notwithstanding that reparation of the loss of the cranial bones occurs in the young.

The child's intellectual faculties are in their normal state. A circumstance worthy of note is that, at the solution of continuity in the bone, where the soft parts alone cover the brain, there sometimes takes place a depression, and then the brain is plainly seen raised up by the arterial pulsations at the bottom of this cup-like depression. When this appearance manifests itself, experience has shown that the child is not well. At other times, the soft parts remain on a level with the cranial bones, and the arterial pulsations are slightly, if at all, observable.

CASE IX. *Amputation of both arms during delivery, yet the infant survived.* Lancet, 1829, vol. xvi.

Much sensation has lately been excited amongst the medical public in France by the trial of Dr. Helie, of Chenu, in the department de l'Orne, for alleged improper treatment of a case of labor, in which both arms presented, and the mother, after suffering for 24 hours with ineffectual pains, appeared to be in imminent danger; the child having, during the last ten hours, exhibited no signs of life, and the arms, being violently compressed by the os uteri, were swelled, livid, and in a state approaching to gangrene. Dr. Helie, having in vain endeavored to turn the child, resorted to, what appeared to him, the only means of saving the mother's life, viz., amputation of both arms. After the operation, the child was readily born; it was alive, and survived the mutilation; the wounds, which, according to H.'s assertion, emitted not a drop of blood, either during or after the operation, were simply dressed and speedily healed. The parents of the child brought an action against Dr. Helie, but the Tribunal professed its incompetence to decide on the case, and applied to the Académie Royale de Médecine, which referred the matter to a committee, consisting of five of its members, viz., MM. Desormeaux, Deneux, Gardien, Moreau, and Adelon. The first report which they made was decidedly unfavorable to Dr. Helie; it, however, met with much opposition when communicated to the Académie, and was returned to the committee for reconsideration. The second report, although not so severe, was also against Dr. Helie; and the third report, which was to be considered as decisive, was expected on the 12th of March, when a long discussion on the subject was anticipated in the Académie. As far as appearances go, it seems that the practitioner was certainly very blamable, and that the decision of the Académie, and, consequently, the verdict of the Tribunal, will be against him.

CASE X. *Artificial premature delivery, of a living child at the eighth month, in a dwarf three feet two inches in stature, successfully induced.* By Prof. Dubois, of Paris. *Lancet*, 1839, vol. xxxviii.

M. Dubois recently communicated the following interesting case to the Royal Academy of Medicine :—

The subject of this case was a girl, 23 years of age, and of stature, three feet two inches, scarcely that of a child five years of age. Her mother was of ordinary size, but her father was only three feet six inches in height. Three of their children were also dwarfs. Two years ago she was seen, for the first time, by M. Dubois. She was then in labor, but the child's head could not enter the inlet of the pelvis. M. Dubois, therefore, opened the head, and the latter descended to the vulva. But here a new difficulty presented itself; the vulva was extremely narrow, and the fœtus could not have passed, had not the walls of the vagina given way of their own accord, and the delivery was completed. The child, without the brain, weighed five and a half pounds.

Last year the girl again became pregnant, and immediately announced the fact, as she had been desired, to M. Dubois. In February she had arrived at the eighth month of pregnancy. M. Dubois now decided on effecting a premature delivery. The patient was first placed in a warm bath; a speculum was introduced, and a piece of conical sponge passed into the neck of the uterus; at the same time six grains of *secale cornutum* were administered. After a lapse of four hours the patient experienced strong pains, and labor was fully established. At nine o'clock the membranes were ruptured, and it was discovered that the breech presented; some slight difficulty was found in withdrawing the head, but this was soon overcome, and the delivery happily completed. The child was small, but living; the bi-parietal diameter, 3 inches; the occipito-frontal $3\frac{1}{8}$ inches; the length of the child 15 inches; it weighed only 3 pounds 12 ounces. The mother gave it milk for the first few days, and within a short time both parent and child were perfectly well.

CASE XI. *Delivery during sleep.* *Lancet*, 1845, vol. i.

Dr. Schultze was called to a woman who had arrived at her full time with her fourth child, but who had fallen into a state of somnolence so profound, that she could not be waked out of it either by blows, shaking, or acrid vapors. On the third day of this unnatural sleep she was delivered unconsciously, and without awakening, of a living male child. The next day she awoke shortly before Dr. Schultze arrived; had no recollection of her accouchement, and was quite astonished to find herself delivered. This is an important fact for medical jurisprudence, and it is on that account it is recorded by Dr. Schultze.

CASE XII. *Secretion of milk from the scrotum.* *Lancet*, 1835, vol. xxviii.

The following very extraordinary case is contained in the inaugural thesis of M. F. Koller, the first thesis presented to the University of Zurich. There is perhaps nothing similar to it to be found in the annals of the science, if we except a case somewhat analogous, cited in *Hufeland's Journal*, vol. liv, No. 2. The milky nature of the fluid secreted was put beyond all doubt by microscopic observation and chemical analysis. It was found to present all the characters of milk, and its production was evidently connected in some way or another with the exanthema and ulcer of the right lower extremity. The stools and urine were natural throughout the whole period during which the

patient was under observation. The case is taken from the *Gazette Médicale de Paris* of Saturday last, July 4.

H. V., 21 years of age, had enjoyed good health up to the age of fifteen, when he began to complain of some feverish symptoms. A few days afterwards the left lower extremity presented an eruption of small, slightly elevated red spots, occasioning burning heat and pain in the skin: these symptoms soon disappeared, but the foot began to swell, and the lower extremity became tumefied, and soon acquired double its natural volume. The general health of the patient was now in no way influenced by the disease. The tumefaction emptied itself from time to time by two small orifices below Poupart's ligament, giving exit to a white, transparent, viscid fluid, in greater or less quantity. As the tumor diminished the exanthema reappeared. The patient passed three years in this state, which was not altered by the various remedies employed. At this period the genital organs, always little developed and extremely small, began to develop themselves in a sudden and extraordinary manner; the scrotum especially became very large; the external surface of this part was soon covered with a number of small vesicles, which opened, and discharged a great quantity of a milky fluid; when the scrotum was compressed, a quantity of the same fluid issued through the two small pores we have noticed, below Poupart's ligament, on the inner side of the thigh. This secretion, though generally of a nature completely milky, sometimes presented an aspect slightly serous. The tumor continued to enlarge, although the secretion was not constant, periodically, every three or four weeks. There were now pains in the groin and loins, darting to the scrotum, and when the patient assumed the upright posture, about two or three pounds of the milky fluid came away. Since the commencement of the disease in the scrotum, the ulcer of the leg had closed, and the tumefaction of the extremity much diminished. On the 23d of August, 1833, the patient was admitted into the hospital at Zurich. The scrotum was now tumefied, and to the touch gave the sensation of a female breast; the skin of the penis was tumefied; the color of the parts was more deep than natural; the corpora cavernosa were small, and retracted towards the pubes; the testicles also were very small, and drawn up to the rings; the larynx was little prominent, but the voice was not feminine; the beard and the hairs on the pubes were delicate and few; the right extremity was a little larger than the left.

During the patient's stay at the hospital, the secretion of milk took place several times. Thus, about the 26th of August, the usual precursory symptoms appeared, and more than three pounds of milk were discharged. On the 30th there was a new access of fever, and an appearance of the exanthema on the right thigh. On the 11th of September a fresh discharge of about half a pint of fluid took place, not presenting the same white color or consistence as the former, and giving out a little the odor of semen. During the months of September and October, the tumor of the scrotum and the secretion of a milky fluid alternated frequently with the exanthema on the thigh; however, the tumefaction of the skin covering the genital organs, diminished remarkably, as well as the quantity of fluid discharged, which became more serous and troubled in its appearance and finally disappeared.

Chemical examination of the excreted fluid showed it to be of a milky and not of a lymph nature. It had a sweet salt taste, and when allowed to remain for some time, it divided into two parts; the greater portion resembled half-coagulated yolk of egg, running a little into a gray color. The other fluid part had the appearance of slightly coagulated milk, and when examined under the microscope exhibited spheroidal globules of various diameters, smaller, however, than those seen in goats' or asses' milk. The fluid was

analyzed by Professor Lowig, and gave the following results:—100 parts, a fluid, ill-flavored principle.

Butter { Elaine Stearine Butyrine }	.	.	.	.	.	1,649
Caseous matter .	.	.	.	.	.	2,031
Lactic sugar, .	.	.	.	.	.	3,154
Matter containing some osmazome, etc.,	.	.	.	.	.	0,947
Sulph. potass, .	.	.	.	.	.	0,264
Phosphate of lime,	.	.	.	.	.	0,188
Carbonate of lime,	.	.	.	.	.	0,089
Muriate of magnesia,	.	.	.	.	.	0,054
Water, .	.	.	.	.	.	91,305

CASE XIII. *A ludicrous mistake; accumulation in the rectum taken for the head of a fetus.* New Orleans Med. and Surg. Journal, 1852.

The July number of the *New Hampshire Journal of Medicine* brings us (says the *Transylvania Medical Journal*) an amusing article under the caption of "A small Mistake," from Dr. Buzzell. We cannot refrain from presenting to our readers the following extract, exemplifying the assertion with which the Doctor set out, that "it is the easiest thing in the world for the best of people to be mistaken, physicians not excepted." After detailing with some minuteness the previous indisposition of the patient, who appears to have been an unmarried female, about twenty years of age, the Doctor proceeds:—[*Ed. N. O. Med. and Surg. Journal.*]

In the latter part of April she was taken with pains in the lower part of the bowels, which resembled labor pains, and as she was so stupid herself as to be unable to inform her friends what was her real situation, an elderly lady in the neighborhood, who was called upon as a forerunner to the Doctor, and who would officiate in the emergency, was sent for. She decided at once that the girl was in labor. She made an examination, felt "the child's head low down," and the "waters had broke," etc. She advised that a physician be sent for forthwith. A young physician was sent for, who, being informed on his arrival that she had been in "great pain by spells," and that the "waters had broke," the "child's head had been felt," etc., made a slight examination, and not having a very good opportunity of examination, as the patient was very restless, he concluded that the old lady was right, and that the girl was surely in travail. Her pains, however, seemed to abate after the arrival of the Doctor, and that was not regarded as anything very strange for a young woman, having a young physician present.

The waters came away periodically about once in six or eight hours. This rather perplexed the physician, and after spending the night waiting for the "pains to come on," the physician thought, as it seemed to be rather a peculiar case, that it might be advisable to have counsel. I was sent for; but as the messenger was informed, when he arrived in the village, that I was not at home, another physician was sent for, who visited the patient. Upon an examination of the patient, this consulting physician pronounced it to be a case of *superfetation*; and after explaining the case to the family and attending physician, he proposed to send for a surgeon, in order to make an incision in the patient's side, and extract the fetus therefrom." He advised also that a justice of the peace should be sent for to administer the necessary oath on such occasions, or, in other words, "to swear the baby." The justice came in due time, and, as suspicion naturally rested upon the man at whose house the patient had lived, as before stated, she was made to swear the baby on this man—though the justice was not disposed, from the vagueness or in-

definiteness of her answers to his question, to proceed to issue a warrant for the arrest of the father of the *child*.

The case had now assumed a very serious aspect. The character of the patient, and of a hitherto respectable man, was "down," and the news flew on the wings of the wind, as might be expected in this noisy world. I was sent for the next day. The messenger related to me the case as well as he could, and requested me to take my instruments with me, and prepare for the operation. I went to the scene of action, however, under the impression that there was a joke about it. On making an examination of the patient, I found that, instead of its being a case of superfoetation, it was nothing but a large accumulation of feces in the rectum, so large that it occupied nearly the whole of the inferior portion of the pelvic cavity, merging forwards hard on the pubic bones and against the bladder. This explains the reason why the old lady supposed that the "waters had broke." The urine escaped, of course, at different periods, and then "with a rush." I directed the old lady, who had the priority in the call, to oil her fingers and cautiously to deliver the patient of her burden. I advised the father to stay process legally, until the child was born and named, and concluded myself that I should consider it a hard case to be the alleged father of such a child.

The patient is, I believe, as "comfortable as could be expected" under the circumstances. I advised that her bowels might be kept pervious, and I believe she has not had occasion to "send out" again. It would seem that but a small share of common sense would have saved any man from such a blunder; but as the physician who made the mistake claims to be a very scientific man, I am forced to say that the saying quoted in the commencement of this article is emphatically true. Such a case should admonish young practitioners to be cautious and thorough in their examinations, and not to let modesty prevent them from discriminating between a large accumulation of feces in the rectum and a child's head.

CASE XIV. *Traps to catch intestinal worms; the eyes of buttons.*

Dr. Jameison, of Ireland, proposes a more simple fishing-tackle than that published a few months ago in the *Scientific American*, to take tape-worms. He describes the means for this purpose in the *Dublin Medical Press* for December, 1855.

David McCullough, aged 6 years, admitted to the Newtownards Work-house Infirmary, ill of scabies; swallowed, a few days before the 13th of April, 1855, a common bone button, having two of the thread holes joined into one. On the 13th of April, he passed the button with a lumbricus about a foot long in the aperture; the worm had passed about four inches into it, and was there killed. I was in the hospital at the time the child passed it, and the nurse immediately brought it to me; a little inflammatory swelling had occurred on each side of the button.

CASE XV. *A wife's revenge on her husband by having her own thigh amputated in a hospital.*

This we extract from a biographical sketch of Sir Benjamin C. Brodie, in the *Lancet*, written apparently by the editor of that most valuable periodical, and published in 1850. The circumstances must have occurred years ago, and we know not which most to condemn, the surgeon who performed the operation, or the woman, who certainly "had her nose cut off to spite her face," if it was not even a great deal worse than that.

The case seems to us highly improbable, but the *Lancet*, it will be perceived, is responsible for it.

"To illustrate, however, the excessive and culpable recklessness which formerly prevailed, we may relate an anecdote, for the truth of which we vouch, and we could, if we pleased, name the hospital at which the case occurred.

"Late one evening a person came into our office, and asked to see the editor of the *Lancet*. On being introduced to our *sanctum*, he placed a bundle upon the table, from which he proceeded to extract a very fair and symmetrical lower extremity, which might have matched

‘Atalanta’s better part,’

and which had evidently belonged to a woman. ‘There!’ said he, ‘is there anything the matter with that leg? Did you ever see a handsomer? What ought to be done with the man who cut it off?’ On having the meaning of these interrogatories put before us, we found that it was the leg of the *wife* of our evening visitor. He had been accustomed to admire the lady’s leg and foot, of the perfection of which she was, it appeared, fully conscious. A few days before, he had excited her anger, and they had quarrelled violently, upon which she left the house, declaring she would be revenged on him, and that he should never see the objects of his admiration again. The next thing he heard of her was, that she was a patient in ——— Hospital, and had had her leg amputated. She had declared to the surgeons that she suffered intolerable pain in the knee, and had begged to have the limb removed—a petition the surgeons complied with, and thus became the instrument of her absurd and self-torturing revenge upon her husband!”

CASE XVI. *Amputation of the head; patient surviving the operation thirty-six hours.* Wochenschrift für die gesammte Heilkunde—British and Foreign Med.-Chir. Review, 1844.

This case will undoubtedly be considered one of the most remarkable in the collection, and the title here given it is certainly proper, for it is expressly stated that dissection proved it to be, *beyond all doubt and question, a second head*. The patient lived more than a day after the operation, and under more favorable circumstances, it might have been successful.

On the 31st of October, 1843, M. Buhring was called to see a new-born infant, on the back of whose head there was a large tumor, that was in a great measure covered with hair. On an attentive examination, he found that the child had a small head, having the forehead flattened as in the ape, the anterior fontanel normal, the posterior one very large and covered with a thin skin; a part of the left parietal and of the corresponding occipital bone seemed to be wanting at the place where they join to form the lambdoid suture; the face was regularly formed, and the other parts of the body were well developed. On the occiput, at the side, and a little to the right of the fontanel, was situated the tumor, which was attached by a pedicle of an inch and a half in thickness; it seemed to be, as it were, a second head, that was actually larger than the true head of the child. This pseudo-head had the face turned to the right side; it had an ocular cleft, but without any eyeball, a projection in the site of the nose, and a depression in the place of the mouth. No distinct bony plate could be felt in any part; and indeed the round mass appeared to be formed by an elastic hairy scalp, which was of an almost cartilaginous firmness in some points. At the back part of this sort of mole there was a spheroidal mass of a very red color, evidently fluctuating, and yet insensible on pressure; although every other part of the tumor was so tender, that the infant began to cry on the gentlest touch. It was quite otherwise when the pedicle, which joined the two heads together, was compressed; there the sensibility was null; but symptoms of cerebral congestion appeared if the constriction was increased beyond a certain degree.

M. Buhring determined to remove the tumor by ligature; but, first of all, he made an incision into the part which presented a sensation of fluctuation. Between four and five ounces of a transparent yellow serosity were discharged; and, on separating the lips of the wound, he saw distinctly at its bottom two normal cerebral hemispheres, provided with regular medullary convolutions. When the ligature around the pedicle was tightened, the breathing of the infant, which had hitherto been quite tranquil, became hurried and laborious, and the vessels of the face and head, especially the external jugular vein, were very highly congested, and the pupils dilated. Some blood was therefore taken from the jugular vein, before the constriction was completed. When three ounces had flowed, all the accidents ceased, except some degree of embarrassment in the breathing, and certain convulsive twitches or irregular movements of the limbs. The child was applied to the breast, and it seemed to suck without inconvenience. After a few minutes had elapsed, the pseudo-head had become quite cold; and, as it was now completely destitute of feeling, M. Buhring had an opportunity of examining it at leisure. On making a longitudinal incision through the firm hairy scalp, he found a distinct *dura mater* underneath; and within this membrane a red colored medullary hemisphere, in which the great lobes and the crura of the brain were distinctly visible. During all the time of this anatomical examination, the infant continued to suck very quietly; and, for two hours afterwards, it did not exhibit the slightest appearance of suffering. The tumor was covered with pledgets dipped in a spirituous lotion, and these were kept on by means of a light bandage. The child lived for 36 hours after the operation.

Dissection left no doubt as to the nature of the monstrosity: it proved to be, beyond all doubt and question, a second head. The true head was completely organized: the connection that existed between the two was not by any genuine medullary substance, but by nervous cords, bloodvessels, and a prolongation of *dura mater*. All the other organs were in a normal condition.

CASE XVII. *A patient firing three pistol-balls into his own brain, either of which would in all probability have proved instantaneously fatal.* By F. S. Ainsworth, M. D., of Boston, Massachusetts. Boston Med. and Surg. Journal, 1856.

Mr. H. B——, a stout robust man, aged about 40, a merchant of considerable wealth, was noticed, for several days preceding the 30th of April, to be unusually agitated and depressed. His father had been insane during the last years of his life, and several of his family had been affected in a similar way. His condition was attributed to recent reverses in business. He remarked several times that he could never survive the disgrace of a failure, and expressed a determination to commit suicide. On the 28th, a gentleman who occupied rooms with him, found him loading a revolver; he, however, succeeded in obtaining possession of it. The weapon was of the kind known as "Allen's patent," in which the barrels revolve, the hammer is raised, and the pistol discharged, by drawing the trigger. It appears that Mr. B——, immediately after losing the first pistol, went to the same store and purchased another, which he charged heavily, and secreted about his person. His room-mate, feeling anxious about his state of mind, went twice into his chamber on the night of the 29th, and states that he found him, at 2 o'clock, lying on his left side, asleep, and then laid down himself on a couch in a parlor adjoining. He was aroused by some noise, about 4 o'clock in the morning, and finding the room full of smoke, went into the chamber of Mr. B——, whom he found still lying upon his left side, breathing, but speechless, his head slightly bent forwards and bleeding profusely. He went imme-

diately for assistance, calling on a friend, a short distance from the house, and then summoning Dr. W. E. Townsend. On returning he found Mr. B—— still breathing, but before Dr. T—— arrived he was dead. His right hand was found lying by his side, still grasping the pistol, of which three of the five barrels were discharged.

A *post-mortem* examination was made seven hours after death, by Drs. Townsend, Coale, and Ainsworth. The lips were pale and bloodless, and the hair and whiskers on the right side of the head were crisped and burnt. Three external wounds were observed in the right temporal region. The largest, situated an inch and a quarter from the outer angle of the orbit, was irregularly oblong, extending one inch obliquely upwards and inwards, and an inch and a half backwards. On its posterior border was a triangular flap, half an inch in length, which, with the edges of the wound, was ragged, blackened, and curled inwards towards the brain. The general direction was forwards and slightly downwards. The temporal muscle was lacerated and blackened, and at the point where it passed under the zygomatic arch, completely torn in two and the edges turned inwards. The zygoma was fractured at both ends, and the temporal bone was shattered into small fragments, which with the muscle, rested on the dura mater. At the lower border of the wound this membrane was ruptured, and the cerebral substance protruded. The frontal bone was cracked horizontally inwards above the frontal sinus, three and a half inches. Near the median line, curving slightly to the right, was a fracture extending from the nasal process of the frontal bone to the vertex. The temporal bone was separated from the parietal, the whole length of the squamous suture. A fissure extended from near the centre of the temporal bone, through the parietal, to the vertex; and another through the parietal and occipital bones, to the right occipital ridge.

Three-fourths of an inch behind the external wound above described, and an inch and a half above the external auditory meatus, were two small irregularly circular openings, about half an inch apart, surrounded by a dark-red circle an inch and three-quarters in diameter, in which were grains of powder blown into the skin. Under these wounds the temporal bone was broken into four fragments, which were depressed. Between them, resting on a fifth portion, was found a leaden bullet, much flattened and scratched. The right optic nerve behind the commissure, and the right crus cerebri near the pons Varolii, were partially divided. The pons Varolii was covered with a clot of blood. Small coagula were also found in both lateral ventricles. In the left temporal region, between the dura mater and brain, was a large mass of coagulated blood. A small opening existed in the dura mater, corresponding to which, in the squamous portion of the left temporal bone, one inch above the external ear, was found imbedded another bullet, around which the bone was comminuted for a space half an inch in diameter. The projecting surface of the ball was smooth and round, and the inner rough, and scratched.

This case is reported thus much in detail from its importance in a medico-legal point of view; the evidence before the coroner having been such as to render it beyond a reasonable doubt that the wounds were inflicted by the unhappy man himself. Had there been, however, any suspicion attaching itself to another individual, or had the body been accidentally found, with such injuries upon it, the conclusion would have been inevitable that three wounds, such as have been described, could not have been inflicted in succession by an individual upon his own person. In this case, the explanation is to be found in the fact that, in this description of pistol, the fire flies from the cap which is exploded to the one on each side of it, producing three

nearly simultaneous discharges. The same effect is sometimes produced by the imperfect boring of the barrels.

CASE XVIII. *A patient born blind restored to sight when twenty-four years of age; the cataracts were removed by Dr. Forlenze.*

This we take from the article "*Cas Rares*" of the *Dictionnaire des Sciences Médicales*, in sixty volumes.

Louis Garin, born blind, was educated in the institution for the blind, and in the month Fructidor, year 7, entered a hospital of Paris, France, to be operated upon by Dr. Forlenze, who had already restored to sight those born blind, in 1796, at Lucerne, and in 1798 at Amsterdam.

Garin had never seen objects, but could distinguish by one eye only day from night, and recognized very striking colors when applied to that eye. Red he could best perceive; orange color was to him a shade of red; green he could not distinguish. By the sound of the voice and manner of speech he recognized at once both the sex and age of persons. The cataracts were said to be liquid and capsular, and also adherent. The patient could not control the movements of the eyes. Notwithstanding these conditions of the organs, the operation was completely successful. The moment the cataracts were extracted Garin exclaimed, "My God! what a brilliant light," and experienced severe pain, caused by its admission to the retina. His eyes had to be closely bandaged to prevent his suffering. On the sixth day after the operation, a commission named by the Institute, with several distinguished professors and surgeons, visited the patient to witness its happy results. On drawing the window curtains he said he saw much light. On presenting white paper at the distance of two feet he observed it was white. He recognized red color. Black he defined as if light disappeared. He learned to see accurately only by touching objects; but before doing this he saw them as they really were, and not reversed, as Lecat, Buffon, Condillac, and other metaphysicians supposed he would have done.

CASE XIX. *The fire-proof man.* Lancet, 1828, vol. xiv.

The French medical journal, *La Clinique*, gives an account of the experiments of M. Martinez, the fire-proof man, as he is called, who is now one of the principal objects of attraction at Paris. M. Martinez is not, like the celebrated Russian salamander, Chamouni, insensible, for a given period, to the effects of heat; on the contrary, he suffers so much exhaustion from his experiments, that he is only able to repeat them once a week. He assumes the title of "Incombustible;" but after the fate of Chamouni, it may reasonably be doubted whether any man can fairly lay claim to the privilege of being fire-proof. The Russian salamander was remarkable for the simplicity and singleness of his character, as well as for that idiosyncrasy in his constitution, which enabled him, for so many years, not merely to brave the effects of fire, but to take delight in an element where other men find destruction. He was above all artifice, and would often entreat his visitors to melt their own lead, or boil their own mercury, that they might be perfectly satisfied of the gratification he derived from drinking those preparations. He would also present his tongue, in the most obliging manner, to all who wished to pour melted lead upon it, and stamp an impression of their seals. His merit, however, was never sufficiently acknowledged, till he was found dead in the oven which he had so often entered to amuse his visitors, by what he called his grand experiment,

"Urit enim fulgore suo qui prægravat artes
Infra se positas; extinctus amabitur idem."

This grand experiment was to enter an oven with a raw leg of mutton, and not to retire from it till the joint was thoroughly baked. Chamouni entered the oven once too often; his ashes were collected, and conveyed to Mojaisk, his native town, where a neat monument has been erected to his memory, and a well written Latin inscription commemorates his fate.

M. Martinez, the French salamander, says *La Clinique*, was born at the Havana; he is 43 years of age, about five feet high, and appears to be of a robust constitution. He has the complexion and features of a Creole; his nose is flat, and, at present, somewhat disfigured by sores produced by the bursting of a thermometer, which was imprudently carried too near his person, at a late experiment, in order to ascertain the temperature of his body. M. Martinez, in his youth, followed the trade of a baker, and from the age of nine or twelve years, was constantly in the habit of exposing himself to very high degrees of heat. Practice has enabled him to bring to perfection a capacity for supporting heat, which seems to be peculiar to persons engaged in the occupation of baking. Tillet gives an account of three girls, servants to a baker, who would remain in an oven heated to a very high temperature, while they swept it, laid the wood, and set the loaves for baking, taking no other precaution than that of keeping the door open. He has ascertained that they remained fourteen or fifteen minutes in the oven, when it was heated to 270° Fahrenheit, ten minutes at 279°, and fifteen minutes at 364°. Thus they supported a degree of heat 67° above that of boiling water, and 170° above that of the human body. Duhamel, Banks, Solander, and others, have shown by experiments made upon themselves, that man may support for some time, a temperature exceeding the natural heat by 174°. On Tuesday last, M. Martinez, the fire-proof man, exhibited his experiments before a vast concourse of spectators. To obviate all suspicion, an oven was heated in the middle of one of the grass-plats in the garden of Tivoli.

First experiment.—At twenty-two minutes after eight, M. Martinez entered the oven; the thermometer, which was left in it eleven minutes, indicating 338° Fahrenheit. He remained in the oven fourteen minutes; his pulse, which was at 76 when he entered, beat 130 strokes in a minute when he came out.

Second experiment.—At two minutes before nine, his pulse was at 85; he again entered the oven, and remained seven minutes, the thermometer being at 285° Fahrenheit. The crowd of spectators who rushed forward to see him, when he came out, prevented the exact ascertainment of the state of his pulse, but it was less frequent than at the end of the first experiment.

Third experiment.—At nine minutes past nine, M. Martinez was placed upon a plank, surrounded with candles, and introduced into the oven, the door of which was then closed. He remained in it three minutes. On coming out his face was of a violet color, but he hummed a tune with great apparent indifference, and plunged himself into a bath of cold water. Before the immersion, his pulse beat 144 strokes in a minute.

CASE XX. *Emphysema, threatening death, from flogging.* Rust's Magazine. Lancet, 1829, vol. xvi.

A prisoner in the house of correction, at Meiningen, who had been affected with anasarea, was, a short time after his recovery from it, sentenced to the punishment of flogging, of which, on the following day, there remained no trace, except a slight ecchymosis in the left lumbar region. Two days afterwards the face, neck, and upper part of the chest became swollen, and, on pressure, exhibited distinct crepitation. The general health of the patient was not affected, and respiration was perfectly free; during the following night, however, the swelling rapidly spread over the trunk and the extremi-

ties; at the same time he was seized with great anxiety, oppression of the chest, cough, and very violent dyspnœa; and when Dr. Jahn, who relates the case, saw him in the morning, the head, trunk, and extremities were at least twice as large as in their natural state; the eyelids formed two oval bladders, each the size of a large apple, the eyes were emphysematous, and protruded from the orbits; the cheeks and lips were swollen, both externally and internally; the scrotum was as large as an adult's head, and the penis had acquired the size of the arm; a viscous sweat covered the whole body, which, when struck, resounded like a drum, and crepitated when forcibly pressed by the hand; the dyspnœa was very violent, breathing so hurried and laborious, that speech was completely suspended; the cough was dry and frequent, and there was some foam at the mouth. The danger of suffocation being imminent, a trocar was plunged into the scrotum, from which a great quantity of inodorous gas immediately escaped with great force and a whistling noise; the patient felt instant relief; the swelling speedily subsided, and respiration became more easy. The opening made in the scrotum being, however, not large enough to give exit to all the accumulated air, the trocar was plunged into several parts of the body and extremities, and as the air still continued to be secreted in the areolar tissue, the operation was several times repeated. As soon as the condition of the patient permitted, the chest was carefully examined, but no fracture or depression of the ribs, nor any laceration, or other lesion, could be discovered; moreover, the patient felt quite well, and had no pain either on deep inspiration or on coughing. He was submitted to a rigorous antiphlogistic treatment, under which he, within a short time, perfectly recovered. The elastic fluid, however, still continued to be secreted under the skin, although in smaller quantity; it was readily evacuated by the trocar, and under the continued use of aromatic frictions, disappeared entirely after ten days more.

CASE XXI. *A stone shot into the bladder successfully extracted by lithotomy.* By William Lewis, Esq., Surgeon, of Wolverhampton, Eng. *Lancet*, 1830, vol. xvii.

John Roden, a boy about eleven years of age (of the Deanery-row), of a spare habit and pale complexion, received a shot-wound on the 5th of November, 1828, while passing a door from behind which a pistol was discharged, loaded with a stone bullet; the shot, after penetrating the door, entered the upper part of his left thigh, and afterwards passed into the bladder. On my first visit, I found a contused wound of a circular shape. I extracted several small pieces of wadding, but was not able, by the most minute examination, to detect the presence of any other foreign body. Syncope supervened, although the hemorrhage was slight, and no urine passed through the wound at that time. On the following day there was great external inflammation about the region of the bladder, with excruciating pain whenever an attempt was made to pass the urine; great tenderness upon pressure of the abdomen; pulse quick, hard, and full; tongue dry; great thirst, and many other symptoms of excessive inflammatory action. A free abstraction of blood, both general and local, with oleaginous purgatives, enemata, warm fomentations, and a strict adherence to the antiphlogistic regimen, soon subdued these violent symptoms, and on the third day, the urine passed freely through the orifice in the thigh, and continued so to do for many weeks; during this time, bloody urine was occasionally passed by the urethra, and frequently a considerable quantity of mucus; there was also a great sympathetic swelling of the glands in the groin. The wound at length became partially healed, and the symptoms of stone in the bladder were very much aggravated. I was par-

ticularly anxious at this time to introduce a sound; but neither the parents nor the patient would consent, and at length the wound entirely healed, and the swelling in the groin gradually disappeared. I then succeeded in introducing the sound, and immediately detected some foreign body in the bladder. Soon afterwards I determined upon performing the lateral operation of lithotomy, which I did on the 23d of June, in the usual manner, with the gorget, and extracted the marble without difficulty, considerably increased in size, from a deposition of calculous matter adhering firmly to it. Not a single unfavorable symptom resulted from the operation, and in a fortnight the boy was enabled to get about. He now enjoys perfect health.

CASE XXII. *A patient with a long memory; paying the doctor thirty years after the services rendered.* Lancet, 1843, vol. xlv.

This surely belongs to the Marvellous in Medicine.

At the battle of Ocana (Spain), a native surgeon was left in charge of a Polish officer in the French army who had been dangerously wounded. The surgeon dressed his wounds, and then, having been called to Madrid on duty, left his patient in the house of a lady, by whom the greatest care was taken of her guest. The officer recovered, and left to rejoin the army, assuring those who had aided him to regain his health of his perpetual gratitude. Thirty years had passed away, when, a short time ago, Dr. Hurtado, now one of the principal physicians in the Spanish capital, and who had been the surgeon performing the above duty after the battle of Ocana, received from Poland a remittance of fifty thousand francs (20000*l.*), bequeathed to him by Prince Brunowski, lately deceased, in Warsaw, and a similar sum was left to the lady above alluded to. It need scarcely be stated that the prince was no other than the officer who had been wounded, but whose "deadly wound was healed."

CASE XXIII. *Sensation and motion restored to a paralyzed arm, by a violent effort of the will.* American Journal Med. Sciences, 1853, vol. xxv.

Dr. Bowditch mentioned the case of a young woman, who had been under his care at the Massachusetts General Hospital. She was a domestic, æt. nineteen years, and, in the winter of 1851-2, fell upon the ice, while carrying a basket of clothes; was confined two months with the injury, while nothing was perceptible except a slight partial dislocation of the sterno-clavicular articulation of the right side. There was for months, however, constant pain in right side of trunk, and total paralysis of motion of right arm. Sensibility also much lessened; could bear without flinching the hardest pinch. Various remedies had been applied since her entrance at the Hospital, Sept. 8, 1852. with gradual relief to the side—the paralysis of the arm remaining the same. Finally, electricity was tried for several months, with occasional omissions.

Jan. 4. The report was paralysis of arm, as before.

5th. More sensitiveness to electricity than at any previous period. The application was reduced in strength. The same evening, at supper, the patient, having perceived no difference in the limbs, made a sudden violent effort to raise the palsied limb, in order to save a cup that was falling from the left hand, and immediately the power was restored. The next day the report was, "can move fingers and arm equally well with the corresponding parts of left upper extremity; can grasp, but less firmly than with the left. Sensation (by comparison) equal in both arms; quite sensitive to a pinch."

Since that hour the patient has continued improving, and has daily sewed, using her right hand in the operation.

CASE XXIV. *Hydrophobia developing intelligence in a cretin; death.* American Journal Med. Sciences, 1854.

The following curious case is related by M. Niepce : A. Chauvet, a cretin from birth, at the age of 17 years presented, in a marked degree, all the physical and mental characters of cretinism. He could only articulate a few words imperfectly ; he had not sufficient intelligence to learn reading or writing, nor to understand the catechism ; his affections were little developed—he had some liking for his mother, but showed none for his brother. On the 10th of May last he was bitten by a mad dog ; the wound was slightly cauterized with some drops of ammonia by a druggist, about an hour after the accident. Nothing was observed till the 27th of July following, at about eleven o'clock, when Chauvet refused to drink or eat ; and two hours afterwards all the symptoms of hydrophobia made their appearance. From the commencement of this disease, to the great astonishment of every one, Chauvet spoke with much greater facility than he had ever done before, addressing those around him, and relating the suffering which he felt. In the intervals of the paroxysms he called his mother and brother, showing his affection for them by the most tender caresses, and entreating them not to leave him alone. He caused the priest to be sent for, and on his arrival expressed with tears his bitter regret that he had never been able to learn the catechism. During the remainder of his illness, his intelligence became always lucid during the paroxysms of suffering, when he would put questions to those around him and give directions to them ; but as soon as calm or depression ensued, the natural state of his intellect returned. On the 1st of August acute delirium came on, during which he spoke frequently and with great volubility, citing facts which had happened several years before, and to which he had never seemed to pay attention. The delirium lasted till night, when it was succeeded by a deep coma. He died at five o'clock the next morning.

The introduction of anæsthetic agents into the modern practice of surgery. Extracted from a paper read by Henry Bigelow, M. D., Prof. of Surgery in the Massachusetts Medical College. Boston Med. and Surg. Journal, 1846.

It has long been an important problem in medical science to devise some method of mitigating the pain of surgical operations. An efficient agent for this purpose has at length been discovered. A patient has been rendered completely insensible during an amputation of the thigh, regaining consciousness after a short interval. Other severe operations have been performed without the knowledge of the patients. So remarkable an occurrence will, it is believed, render the following details relating to the history and character of the process, not uninteresting :—

On the 16th of October, 1846, an operation was performed at the hospital upon a patient who had inhaled a preparation administered by Dr. Morton, a dentist of this city, with the alleged intention of producing insensibility to pain. Dr. Morton was understood to have extracted teeth under similar circumstances, without the knowledge of the patient. The present operation was performed by Dr. Warren, and though comparatively slight, involved an incision near the lower jaw, of some inches in extent. During the operation the patient muttered, as in a semi-conscious state, and afterwards stated that the pain was considerable, though mitigated ; in his own words, as though the skin had been scratched with a *hoc*. There was probably, in this instance, some defect in the process of inhalation, for, on the following day, the vapor was administered to another patient with complete success. A

fatty tumor, of considerable size, was removed by Dr. Hayward from the arm of a woman, near the deltoid muscle. The operation lasted four or five minutes, during which time the patient betrayed occasional marks of uneasiness; but upon subsequently regaining her consciousness, professed not only to have felt no pain, but to have been insensible to surrounding objects—to have known nothing of the operation, being only uneasy about a child left at home. No doubt, I think, existed in the minds of those who saw this operation, that the unconsciousness was real; nor could the imagination be accused of any share in the production of these remarkable phenomena.

* * * * *

A boy of sixteen, of medium stature and strength, was seated in the chair. The first few inhalations occasioned a quick cough, which afterwards subsided; at the end of eight minutes the head fell back, and the arms dropped, but owing to some resistance in opening the mouth, the tooth could not be reached before he awoke. He again inhaled for two minutes, and slept three minutes, during which time the tooth, an inferior molar, was extracted. At the moment of extraction the features assumed an expression of pain, and the hand was raised. Upon coming to himself he said he had had a "first-rate dream—very quiet," he said, "and had dreamed of Napoleon—had not the slightest consciousness of pain—the time had seemed long;" and he left the chair, feeling no uneasiness of any kind, and evidently in a high state of admiration. The pupils were dilated during the state of unconsciousness, and the pulse rose from 130 to 142.

A girl of sixteen immediately occupied the chair. After coughing a little, she inhaled during three minutes, and fell asleep, when a molar tooth was extracted, after which she continued to slumber tranquilly during three minutes more. At the moment when force was applied she flinched and frowned, raising her hand to her mouth, but said she had been dreaming a pleasant dream, and knew nothing of the operation.

A stout boy of twelve, at the first inspiration coughed considerably, and required a good deal of encouragement to induce him to go on. At the end of three minutes from the first fair inhalation, the muscles were relaxed, and the pupils dilated. During the attempt to force open the mouth he recovered his consciousness, and again inhaled during two minutes, and in the ensuing one minute two teeth were extracted, the patient seeming somewhat conscious, but upon actually waking he declared "it was the best fun he ever saw," avowed his intention to come there again, and insisted upon having another tooth extracted upon the spot. A splinter which had been left afforded an opportunity of complying with his wish, but the pain proved to be considerable. Pulse at first 110, during sleep 96, afterwards 144; pupils dilated.

The next patient was a healthy-looking middle aged woman, who inhaled the vapor for four minutes; in the course of the next two minutes a back tooth was extracted, and the patient continued smiling in her sleep for three minutes more. Pulse 120, not affected at the moment of the operation, but smaller during sleep. Upon coming to herself she exclaimed that "it was beautiful—she dreamed of being at home—it seemed as if she had been gone a month." These cases, which occurred successively in about an hour, at the room of Dr. Morton, are fair examples of the average results produced by the inhalation of the vapor, and will convey an idea of the feelings and expressions of many of the patients subjected to the process. Dr. Morton states, that in upwards of two hundred patients similar effects have been produced. The inhalation, after the first irritation has subsided, is easy, and

produces a complete unconsciousness at the expiration of a period varying from two to five or six, sometimes eight minutes; its duration varying from two to five minutes; during which the patient is completely insensible to the ordinary tests of pain. The pupils in the cases I have observed have been generally dilated; but with allowance for excitement and other disturbing influences, the pulse is not affected, at least in frequency; the patient remains in a calm and tranquil slumber, and wakes with a pleasurable feeling. The manifestation of consciousness or resistance I at first attributed to the reflex function, but I have since had cause to modify this view.

It is natural to inquire whether no accidents have attended the employment of a method so wide in its application, and so striking in its results. I have been unable to learn that any serious consequences have ensued. One or two robust patients have failed to be affected. I may mention as an early and unsuccessful case, its administration in an operation performed by Dr. Hayward, where an elderly woman was made to inhale the vapor for at least half an hour without effect. Though I was unable at the time to detect any imperfection in the process, I am inclined to believe that such existed. One woman became much excited, and required to be confined to the chair. As this occurred to the same patient twice, and in no other case as far as I have been able to learn, it was evidently owing to a peculiar susceptibility. Very young subjects are affected with nausea and vomiting, and for this reason Dr. Morton has refused to administer it to children. Finally, in a few cases, the patient has continued to sleep tranquilly for eight or ten minutes, and once, after a protracted inhalation, for the period of an hour.

The following case, which occurred a few days since, will illustrate the probable character of future accidents: A young man was made to inhale the vapor, while an operation of limited extent, but somewhat protracted duration, was performed by Dr. Dix upon the tissues near the eye. After a good deal of coughing, the patient succeeded in inhaling the vapor, and fell asleep at the end of about ten minutes. During the succeeding two minutes, the first incision was made, and the patient awoke, but unconscious of pain. Desiring to be inebriated, the tube was placed in his mouth and retained there about twenty-five minutes, the patient being apparently half affected, but, as he subsequently stated, unconscious. Respiration was performed partly through the tube and partly with the mouth open. Thirty-five minutes had now elapsed, when I found the pulse suddenly diminishing in force, so much so that I suggested the propriety of desisting. The pulse continued decreasing in force, and from 120 had fallen to 96. The respiration was very slow, the hands cold, and the patient insensible. Attention was now, of course, directed to the return of respiration and circulation. Cold affusions, as directed for poisoning with alcohol, were applied to the head, the ears were syringed, and ammonia presented to the nostrils and administered internally. For fifteen minutes the symptoms remained stationary, when it was proposed to use active exercise, as in a case of narcotism from opium. Being lifted to his feet, the patient soon made an effort to move his limbs, and the pulse became more full, but again decreased in the sitting posture, and it was only after being compelled to walk during half an hour that the patient was able to lift his head. Complete consciousness returned only at the expiration of an hour. In this case the blood was flowing from the head, and rendered additional loss of blood unnecessary; indeed, the probable hemorrhage was previously relied on as salutary in its tendency.

Two recent cases serve to confirm, and one, I think, to decide, the great utility of this process. On Saturday, November the 7th, at the Massachusetts General Hospital, the right leg of a young girl was amputated above the knee, by Dr. Hayward, for disease of this joint. Being made to inhale the preparation, after protesting her inability to do so, from the pungency of the vapor, she became insensible in about five minutes. The last circumstance she was able to recall was the adjustment of the mouth-piece of the apparatus, after which she was unconscious until she heard some remark at the time of securing the vessels—one of the last steps of the operation. Of the incision she knew nothing, and was unable to say, upon my asking her, whether or not the limb had been removed. She refused to answer several questions during the operation, and was evidently completely insensible to pain or other external influences. This operation was followed by another, consisting of the removal of a part of the lower jaw, by Dr. Warren. The patient was insensible to the pain of the first incision, though she recovered her consciousness in the course of a few minutes.

SECTION XV.

ANOMALOUS CASES AND OPERATIONS.

CASE I. *Fistulous communication between the ileum and urinary bladder, simulating stone in the bladder; death from diarrhœa.* By W. C. Worthington, Esq., Surgeon to the Lowestoft Infirmary, and Fellow of the Royal Medical and Chirurgical Society. Communicated by James Copland, M. D., F. R. S. Medical Examiner, January, 1845.

The patient, a female, sixty-five years of age, previously enjoying good health, began, four years ago, to suffer from pain in the right iliac region, the cause of which could not be satisfactorily traced. Having continued to experience this pain, symptoms indicating disturbance of the urinary organs commenced in November, 1842. Her pain was much aggravated. She had frequent and painful micturition; the urine was bloody, ropy, and highly offensive, and fragments of extraneous matter, the exact nature of which was not ascertained, were often found deposited from it. On sounding the bladder no calculus was felt, but there was a grating produced by moving the instrument, which led to its being supposed that some malignant ulceration had taken place in the coats of the bladder. The treatment consisted chiefly in giving anodynes to relieve the pain. The patient survived about four months, and died from an attack of diarrhœa. On *examining the body* after death, adhesions were observed between the convolutions of the intestines and the pelvic viscera. By further dissection it was found that a fold of the *intestinum ileum* was closely adherent to the fundus of the bladder, and that a communication existed between the two cavities by an ulcerated hole which extended through the coats of the intestine and the bladder, and was sufficiently large to admit the point of the index finger. On slitting open the bladder it was found partly filled with feculent matter and undigested food, such as currants, seeds, and other vegetable matter. The coats of the ileum near where the ulceration had taken place, were thickened, indurated, and the canal consequently strictured. The author concluded by quoting Dr. Copland's *Dictionary of Practical Medicine*, where similar cases are referred to, with interesting observations on fistulous communications between the intestines and other viscera.

Vesico-vaginal fistula; new treatment. By J. Marion Sims, M. D., now of New York City. American Journ. Med. Sciences, 1852.

In the January number of this journal Dr. Sims published the improvements he had made in the treatment of this almost incurable affection. These consist in exposing the fistula by position of the patient on the abdomen and knees, a curved speculum, the clamp suture for closing the opening after its edges have been pared, and a sigmoid catheter for retention in the urethra.

Dr. Bozeman also, of Montgomery, Alabama, Dr. Sims' former residence, has proposed the button suture, and with it cured perfectly fourteen of fifteen cases, and one imperfectly. The success of these gentlemen in treating vesico-vaginal fistula is immeasurably beyond all others on this important subject, and reflects honor upon the American medical profession.

CASE II. *Singular investigation on a trial for murder, respecting marks and cicatrices.* London Med. Times and Gazette, 1852.

The following curious case has excited great attention in the law courts of Berlin:—

Sept. 10. 1849, some peasants found on the bank of a rivulet, which flowed into the Spree, the body of a man, whose head had been detached by an incision carried between the first and second dorsal vertebræ. The head had been so much disfigured by the assassins that recognition was impossible. Near the body was a small cane, a hat, and a box of allumettes; some of the clothes were remaining on the trunk.

The day following, two physicians drew up a report, which was unsatisfactory and imperfect. Some time afterwards they both in court declared, together with the magistrates present at the examination, in answer to some questions, that there were no cicatrices from scarifications, nor marks of tattooing upon the body.

A girl came forward and stated, that from the accounts published in the Berlin journals, she felt sure the deceased was her husband. The body was disinterred, and she recognized it by the external organs of generation, as well as by the clothes. Yet the witness was found to be a prostitute, who never had been married in her life. Other researches led to the supposition, that the assassin of the unknown individual was a cattle merchant, named Gottlieb Ebermann. These suspicions, however, did not last long, for there came reasons to believe that Ebermann was the man murdered. It was said of him, that he might be recognized by traces of the cupping scarificator on the wrists, and tattoo marks of a heart, and of the initials "G. E." on the left arm, both of which points of identification were asserted by the very surgeons who had bled him. But Ebermann's sisters and wife stated that they knew nothing of such marks: consequently, there was a second exhumation, five months after the death, but no traces were found on the body. The wife's evidence was not considered valuable, as she had been only recently married and much separated from her husband. A person then came forward, and declared that he had seen and spoken to Ebermann within four-and-twenty hours; he, however, was proved a madman. Lastly, a mistress of Ebermann stated positively that the little cane found near the body belonged to a man of small stature, once a postilion, now a brigand, named Schall, at whose lodgings Ebermann's own cane had been seized. The girl recognized the dress, and particularly the braces which she had herself worked. There was a third exhumation, December 11, 1851, twenty-six months after the death, when the girl recognized the body by something peculiar in the teeth and the beard. On August 11, 1851, this same girl had been nearly assassinated; doubtless by the accomplices of Schall, then in prison. The ques-

tion as to whether the scarifications and the tattoo marks, seen upon Ebermann's body by competent witnesses, could by possibility become effaced by time, was referred to M. Caspar of Berlin. In his report, taken from the observations made in a large asylum for aged and invalid soldiers, a class upon whom tattoo marks are common, he states that out of thirty-six examples, in three the tattooing had become faint with time; in two the marks were partially effaced; in four they were completely obliterated: consequently, says M. Caspar, the marks of tattooing can disappear. A witness came forward and declared, during the investigation, that at fifteen he had tattooed himself on the arm with cinnabar, and that the marks had become entirely effaced. The conclusion of the trial was, that Schall was condemned to death.

In *L'Union Médicale*, Nov. 16, 1852, Dr. Chereau justly observes, respecting Caspar's report, that it is not one which should influence a judicial decision, for it is not stated at what age, with what substance, and in what manner, the marks were produced in the four instances where there was complete obliteration. Are the men to be trusted? How many years elapsed before the marks became effaced? The question cannot be considered in any way satisfactorily settled as it now stands; indeed, Caspar's assertions tend to raise doubts, which heretofore did not exist, upon a point which might be most important in a prisoner's favor, viz., the persistence of these stains. There is evidence that the absorbent glands in the neighborhood of a tattoo mark become filled with pigment. At the time of writing this report, there is in the dissecting-rooms attached to St. Bartholomew's Hospital, the body of a native of one of the islands of the Eastern Archipelago, whose skin has been ornamented to an extent but rarely seen. The whole back, from the sacrum to the shoulders, is covered with circles, radiating stars, and feathers; the arms and the thighs are both marked, but the front of the body is comparatively clear. The absorbent glands in the groins and about the axillæ were of a deep black hue; those in the neck of the ordinary white color. Mr. Coote, the demonstrator of anatomy, succeeded in dissecting out some absorbent vessels leading to the glands in the thigh, filled with black pigment in long streaks. These indications of the action of the absorbents were however, few, and the tattoo marks existed everywhere with as much clearness apparently as at the time when they were first made.

A similar remark may be offered respecting the possibility of the disappearance of cicatrices. If there has been a complete loss or division of integument in its whole thickness, the mark remains obvious till decomposition after death destroys the tissues. (This certainly is an error; cicatrices, even of operations, do sometimes disappear.) If the skin be only partially destroyed, there ensues a cicatrix of a different kind; one much more resembling the natural structure of the skin, unattended with contractions, and capable of becoming very faint, and liable to be overlooked, except upon close examination. We have no hesitation of expressing our opinion that Caspar's report does not tend in any way to invalidate the statement which has heretofore been received in courts of law—namely, that tattoo marks and cicatrices are indelible.

CASE III. *A tumor in the groin containing fifteen worms.* By M. Vanderbach, Medical Society of Loire-Inférieure, France. *Southern Med. and Surg. Journal*, 1837, vol. i.

A female, aged thirty-six years, of a bilious temperament, was afflicted with a tumor in the left groin, which had no known cause, and which gave her much trouble. Although it was not painful, still it was the seat of a peculiar species of incessant trembling, which tormented her and obliged her to keep

her hand constantly applied to it; having remarked that this allayed the pain. On examining it, the tumor had no more than usual warmth, was not red, nor was there any unusual tenderness of the surface; in a word, there were none of the symptoms which generally attend inflammation. On the contrary, its solidity and position (a little external to the abdominal ring), assured M. Vanderbach that it was not a hernia, or of a lymphatic nature. He directed bathing, a light diet, and gentle frictions to the part. Eight days after the tumor reddened in the centre, and the patient felt a degree of pulsation in it. Maturing poultices were then used.

A slight fluctuation soon became perceptible, and the tumor became slightly opened. With much surprise, it was discovered that it contained lumbrici entwined together in a knot. The opening was enlarged, and fifteen large worms were drawn out. Of these, ten were long and very large, three were a little smaller, and two of the size of a crisping pin, and all full of life. On attentively examining the cyst, in order to discover the source of these worms, M. Vanderbach was not able to discover any communication leading from it. The cyst, far from appearing to depend upon an intestinal rupture, was, on the contrary, a complete sac, very smooth, contained no serous matter, and bore no marks of inflammation. Cicatrization was effected and the patient was perfectly cured, without afterwards experiencing any return of the swelling.

The inference must be irresistible that as the worms were lumbrici they came from the intestines.

CASE IV. *Case of natural anæsthesia; death from erysipelas.* By Paul F. Eve, M. D. Southern Med. and Surg. Journal, 1849, vol. v., N. S.

So universal has been the application of the Divine curse to man, that, to suffer and to live are not only inseparable, but may be considered as synonymous terms. In the observation of more than twenty-three years, I have met with but a single exception to this apparently absolute law of our existence. It has occurred to me, that in these days of artificial anæsthesia, a brief narration of this case might not be devoid of interest to the profession; especially as this condition of the system was actually so complete and profound as to have cost the life of the patient.

I had known Mr. A. for several years, and am the intimate friend of his family physicians, the last of whom is one of my earliest and most promising pupils. From them I had occasionally heard that this gentleman had a natural insensibility to pain, previously to his becoming my patient. In 1845, I was first consulted by Mr. A., in reference to the development of cataracts in his eyes. In November, 1846, he had one eye operated upon in a neighboring city, and for a time he could see pretty well. The sight not proving, however, satisfactory, the patient desired the cataract removed from the other eye; and this was accordingly done by couching, on the 6th of March, 1847. Believing that there was a disposition in the case to cerebral congestion, which might produce amaurosis, or even apoplexy, the family physician was advised to keep up some active derivation from the head.

After this second operation upon the eyes, the patient had a rapid recovery, and was soon able to ride over his plantation on horseback. In one of these excursions, he was unfortunately exposed to a severe rain, and apprehending that his eyes might suffer, he ordered his servant to rub the nape of the neck with tartar emetic ointment. Desiring this application to be repeated, he was told that the part was already inflamed, but, as he said he did not feel it, and of course could not see the part affected, his command was repeated and then obeyed. Erysipelas now occurred, and I saw the patient on the 11th of April, being about a month after the last cataract was destroyed. Free in-

cisions were made through the skin of the inflamed neck, and other local and constitutional means employed. The disease, however, continued to increase in spite of most active treatment, coma supervened, and he died during the night of the 14th.

Mr. A. was about fifty-six years old at the time of his death. He was of sanguino-leuco-phlegmatic temperament; was a corpulent man, weighing about 250 pounds, and had been a free liver. He was a lawyer by profession, of good intellect, being a man of strong mind and body, and had acquired considerable reputation as an advocate and politician.

And now in relation to his possessing a natural state of anæsthesia, the following facts are submitted :—

During a political campaign, not liking the appearance of a finger injured in a rencounter, he bit it off himself and spat it upon the ground.

He had at one time an ulcer on a toe, extending finally to the foot, which resisted treatment for nearly three years. Mr. A. told his physician at the time, and has since repeated the same statement, that from first to last, it never gave him the slightest pain.

An abscess also formed in his hand, involving in its progress the whole forearm and arm, which became enormously swollen up to the body, and threatened his life. The lancet had repeatedly and freely to be used, and was followed by a copious discharge of pus for several weeks. During the whole treatment, he says he experienced no pain.

He says he felt no pain when his eyes were operated upon for cataract. Neither did either inflame. I can vouch for his statue-like immobility during the second operation.

When his neck was pustulated by tartar emetic ointment, he did not feel it, but ordered the application to be repeated.

I made three incisions with a bistoury in his neck to relieve erysipelatous inflammation. He was so unconscious of the operation, that after it was performed he asked me to do it, that he might turn over on his back in the bed.

He told his attending physician that he never suffered pain from any cause whatever, until his last illness. For two days after its development he complained of the erysipelas, and then passed into his usual insensible condition, some time before the state of coma supervened.

It is proper to say that Mr. A. was a man of great probity, and never boasted of being insensible to pain.

The only cause suggested for this truly singular and peculiar condition of the system of this patient, is the free use of alcoholic potations to which he was at one time much addicted. But others have drank more than ever he did, without producing the same result. We think the case of sufficient interest to deserve a passing notice.

CASE V. Case of enormous obesity; cured. By Baron Von Graefe, of Berlin, Prussia. *Lancet*, 1827, vol. xii.

The following is an abstract of the history of a case of enormous obesity, which affords some curious and interesting physiological facts, and may serve to warn folks of the danger of excessive eating.

The patient, aged thirty-seven, and named Kröcker, did not, like Bright, Ahrens, Clay, and other truly *great* personages, signalize himself much in his youth, but was content to eat and drink the same quantity of food as his neighbors. At about the age of thirty, he began to give way to a disposition to devour immense masses of meat, and the more he ate the more his appetite increased, until his time was consumed in little else than eating and sleeping. His occupation was that of a butcher,

and animal food was his favorite repast; contrary to the usual habits of such people, Kröcker, however, would devour from eight to ten pounds of tripe at a meal, or from six to seven pounds of beef and sausages. He continued in this way to stuff himself, gradually becoming fatter, until it required sixteen pounds of beef daily to satisfy his hunger! For a bet he has frequently devoured the boiled flesh of an entire calf in a day, seasoned only with salt, in the presence of many persons; and on one occasion, he declared himself ready to attack a second, but he could get nobody to bet against him. He could not trust himself in the sausage manufactory, as he would eat the minced meat by the pound, spreading it over bread with as little ceremony as other people spread treacle. By way of breakfast, or supper, he would clean from two to three dozen of the pettitoes of pigs; and it appears, at last, to have puzzled his friends to know how to supply him. His usual drink was beer, of which he daily drank from two to three quarts. In this way he continued to feed himself, gradually increasing in bulk, his breathing becoming daily more difficult, and his power of locomotion daily diminishing, until he was at last obliged to confine himself to his large chair, and his bed. Every now and then he was in great danger of suffocation; and it was on one of these occasions that Graefe, who has related the case in one of the recent numbers of his *Journal*, was called to him.

He found the man stretched out upon a bed, complaining of very difficult respiration, to such an extent, as to express his fear of being absolutely choked. His lips were of a dull violet color; his eyes appearing to start from his head, the conjunctivæ being of a bright red color; the entire countenance was of a dark crimson; and the pulse was tremulous, irregular, and frequently intermittent. He complained also of great palpitation of the heart; although, from the immense projection of the abdomen, and the huge pendulous breasts, it was impossible to bring the hand upon the part of the chest covering it. He could only speak at intervals, and that with great difficulty. The abdomen protruded, so as to cover the upper halves of the thighs; and on several parts of its immensely distended surface were round reddish spots, of about the fourth of an inch in diameter, hard and painful to the touch, somewhat resembling small lipomata or fatty tumors. Although the chamber in which he lay was kept very clean, and his linen frequently changed, the odor exhaled was exceedingly offensive, and resembled much the smell of a dissecting-room, or a butcher's shop, on the evening of a hot day. Kröcker was five feet four inches high; the circumference of his abdomen was five feet five inches; the circumference of his thigh two feet four inches; of the calf of his leg one foot seven inches; his breasts measured one foot eight inches in circumference at their bases, and were eight inches long, being almost as pendulous as those of the Hottentot women. His weight, at the time he was put under Graefe's care, was about 400 pounds; but immense as this weight may appear, other instances are on record of those who have exceeded it. The fat man of Leeuwarden, who was exhibited before the medical faculty of Leyden, and taken about from place to place in Holland in a boat as a show, weighed 503 pounds; the woman, whose history is given by Gunz, weighed 492 pounds, Ahrens 450, and our countryman, Edward Bright, the fat man of Essex, as he was commonly called, weighed 616 pounds.

This patient, Kröcker, was rescued from his immediate danger by copious and frequent bleedings, by large doses of calomel, and the substitution of fasting for his enormous stuffing. Purgative medicines were frequently given, a strictly vegetable diet, and vegetable acids, were ordered; and, in about four weeks, he was reduced to about 316 pounds. In the space of four months, during the half of which time he took large doses of iodine, with occasional

purgatives, the iodine being found very much to accelerate absorption, he was reduced to about 267 pounds, and enjoyed good health; was active, cheerful, and able to resume his former business. At the time the history of the case was concluded (August 10, 1826), he was reduced to 209 pounds, his health being good, and his appetite moderate.

CASE VI. Pregnancy in the substance of the womb; delivery at the second month through the bladder, by lithotomy. By the late Professor Delpach, of Montpellier. *Lancet*, 1830, vol. xvii.

A female, twenty-seven years of age, was, in the second month of pregnancy, affected with a violent pain in the bladder, and dysury, which symptoms were evidently caused by a foreign body at the neck of the bladder. After repeated fruitless attempts to remove it, a small body, which is said to have had great resemblance to a fish-bone, and after it a considerable quantity of hair, beset with urinary concretions, was extracted and voided with the urine. Although the pain and difficulty of making water after this became less, there were still unequivocal symptoms of a foreign body in the bladder, and the operation of lithotomy was accordingly decided upon. After the division of the neck of the bladder, several balls of hair presented themselves, and were readily extracted; it appeared as if they proceeded from the right posterior portion of the bladder. After the removal of the tumor, which protruded into the cavity of the bladder, a large cavity was found, penetrating into the substance of the uterus, and containing a mass of the size of a hen's egg, which, after the removal was found to consist of a piece of skin beset with hair, and small pieces of bone resembling rudiments of an upper jaw-bone, malar bone, and the portion of an alveolar process with a molar tooth. After the operation, the health of the patient gradually improved, and the function of the bladder was within a short time completely restored.

CASE VII. Lithotomy in the male; no stone discovered; symptoms relieved. By Mr. Scott, of the London Hospital. *Lancet*, 1832, vol. xxiii.

J. W——, ætat. eight years, was admitted into this hospital under the care of Mr. Scott, with symptoms of stone in the bladder; he complained of frequent desire to make water, and of great pain in voiding his urine, particularly at the end of the penis; the urine was frequently bloody, and sometimes it would stop while in the act of voiding it; had pain in the loins, and in fact every symptom of stone in the bladder.

On his admission he was sounded by Mr. Scott, who thought he felt a small stone, which was also thought to be present by several of the pupils who were allowed to examine him. He had been operated on by that gentleman for this affection about four years ago, when a calculus was removed from his bladder.

In consequence of these symptoms the boy was, on the 28th of November, brought into the operating theatre, for the purpose of undergoing the operation of lithotomy. On being placed on the table he was sounded by Mr. Scott, Sir William Blizard, Mr. Luke, and Mr. Adams, all of whom considered that they felt a calculus in the bladder; in fact, no one appeared to entertain the slightest doubt of one being there; when, however, Mr. Scott had made the necessary incision into the bladder, and introduced the forceps, no stone could be felt, and after some time the patient was removed to his bed. A careful examination was made to see if the stone had passed out of the bladder with the gush of urine, but none could be discovered, although if one had been there it must have been found.

Immediately after the operation he took twenty drops of the tincture of opium, and subsequently two doses, each containing 10 drops.

29th. Passed a very restless night, crying and screaming very much. His skin is hot, pulse quick; his bowels have not been opened; part of the urine passes through the wound in perineo, and part by the urethra.

30th. Passed a better night, having had some comfortable sleep after taking 10 drops of the tincture of opium. His bowels not having been relaxed, he took this morning half an ounce of castor oil.

From this time (December 10th) he has been going on well; the whole of the urine now passes per urethram; the wound in perineo has almost entirely healed up; his general health is tolerably good, and he is now quite free from any symptom of stone in the bladder, although none has been discovered.

CASE VIII. Operation for stone in the male bladder, in St. George's Hospital, London; no stone found. By Mr. Hawkins. *Lancet*, 1836, vol. xxxi.

It having been reported that Mr. Hawkins intended to operate for stone this morning, a numerous body of pupils collected to witness the proceeding. At the usual hour, the surgeons being assembled, a child, apparently about two years old, was placed upon the operating table, supported by an assistant, and the usual preliminary steps having been accomplished, at a quarter-past one o'clock Mr. Hawkins commenced by making a free incision along the perineum. Having cut into the bladder, the fingers of the operator were introduced to ascertain the position and size of the stone, and after having turned them about for some time without success he withdrew them, and Mr. Keate tried to find the stone, as did also Sir B. Brodie (who came in during the operation) and the other surgeons. It is said, that after this general examination Sir Benjamin told them "to send the child away, as no stone existed in the bladder;" but this advice was not followed, and repeated trials were again made by Messrs. Hawkins and Keate, which having been continued for a considerable time, injecting instruments and sounds were put in requisition, when the bladder was injected through the orifice made by the operator, and sounds of various shapes, more or less curved, were severally introduced, amidst the cries of the little patient, who appeared to suffer the most excruciating agony from the proceeding. The fingers were then again introduced, but after fruitless attempts had been made to find out the situation of the calculus, the child was removed from the table, twenty-three minutes having expired from the period of making the incision. When the patient had been removed, a diligent search was commenced by Messrs. Hawkins, Keate, and Babington, amongst the cloths, and in the sandbox, etc., with the chance of finding a stone there. The search might have continued for a long time had it not been stopped by some hissing, which induced Mr. Hawkins to turn round and condemn the sounds, the examiners then giving up the pursuit. The patient was admitted under the care of Mr. Hawkins, under a supposition that he labored under stone. He was sounded at the commencement of the week by Messrs. Hawkins, Keate, Babington, and Cutler, all of whom conceived that they felt a stone. He was again sounded previous to the operation, by Messrs. Hawkins, Keate, and Babington with the same result. "I have no doubt that the stone is small," said Mr. Hawkins, at the close of the proceedings, "and concealed between the folds of the bladder; there are many folds in the bladder, as you are all aware, and occasionally the stone becomes entangled there, so as to elude the grasp of the operator. I am fully convinced that there is a stone now in this child's bladder, which will probably become encysted." During the delivery of these observations Mr. Keate interposed, and stated that he had felt the stone in the bladder with a sound, after the incision had been made.

Ultimately a consultation was held amongst the surgeons, and cases were related by Messrs. Keate and Brodie of a similar nature. In one of these which occurred to Mr. Keate, sen., the patient recovered, but died six years afterwards, under the care of Mr. Thomas, and upon a post-mortem examination, a stone was found encysted in the bladder, like an acorn in its cup.

CASE IX. *Lithotomy in the male; no stone found.* By the late Prof. Roux, of Paris. *Lancet*, 1848, vol. i.

This case, *probably of incarcerated calculus*, is the only one of its kind which M. Roux has met with during his long professional life. The patient, aged 25, states that from his seventeenth year he had experienced much uneasiness about the urinary organs. Latterly he has had severe attacks of nephritic pains, but according to his description the principal seat of distress is in the bladder; his sufferings are very intense in the act of micturition, and have latterly been very persistent. Fatigue and long standing increase them, and he graphically adds, that when he has evacuated the bladder, he feels as if some burning substance rolled along the urethra, and rested in the glans, where the sensation becomes exquisitely painful. The urine, soon after being passed, yields a lateritious deposit and a cloud of ropy mucus. All these symptoms seemed to indicate a calculus, though not absolutely so, as they might be produced by neuralgia or sub-inflammation of the trigone or of the neck of the bladder. M. Roux several times sounded the bladder, and the result was the detection of a hard resisting body, fixed in one spot, giving a sound on being struck, perceptible both by the surgeon and the persons around. The stone seemed to be situated towards the anterior part of the organ, a little to the right of the median line. From several circumstances, it seemed to M. Roux that he had to do with an incarcerated calculus, although the situation of the body was not quite favorable to this opinion; for it is well known that concretions of this nature generally gravitate towards the inferior fundus of the bladder, and it is rather difficult to conceive how it could get incarcerated in the anterior wall. Bands, septa, or a tumor, could, on the other hand, not yield the clear sound which had been produced by percussion. The lateral operation was resolved upon, and it should be noticed, that before the incision was made, the existence of the stone was again verified by percussion. The bladder being opened, search was made with a great number of different instruments, and also by the finger, but no calculus could be found. The staff introduced by the wound, on being struck against the anterior wall, again produced the sound so often heard before, and the surgeon was of course thereby induced to hope that his efforts would at last be successful. He therefore continued the search for almost half an hour, but on finding that all was in vain, he desisted, and the patient was put to bed. Since the operation (about five weeks ago), no complication has interfered with the gradual cicatrization of the wound, which has since progressed very favorably.

Although the cysts of incarcerated calculi generally form in the lower part of the bladder, stones have been known (Boyer) to get surrounded by a fold of mucous membrane under the symphysis pubis, and a case is mentioned by Lapeyronie, where the aperture of the cell containing the stone was quite hidden by a sort of membranous curtain entirely covering it. Meckel found, at a post-mortem examination, all the coats of the upper part of the bladder grasping an enormous calculus, which was, in some degree, suspended. Ledran and Deschamps have recorded similar cases. B. Bell and Louis Leblanc mention patients in whom the bladder, contracting upon a stone, has entirely

surrounded it, and thereby turned the organ into a bag composed of two cavities. Verdier also relates that Bordenave, wishing to practice lithotomy upon the subject, introduced a stone into the bladder, as usual, by an incision above the pubes. This same calculus could, however, not be found when the organ was entered by the perineal wound, and the bladder being then examined, it was found divided into two cavities communicating with each other by a very small aperture. But as M. Begin remarks, in the *Dictionnaire de Médecine*, the calculus may also, in following the oblique direction of the ureter, glide between the mucous and muscular membranes, and there go on increasing in size. Thus Ledran felt distinctly a stone impacted in the aperture of the ureter, and could not extract it at the time, though he succeeded a couple of months afterwards, when the incarcinating membrane had partially given way by inflammation.

It will become pretty apparent, by the foregoing considerations, that there have been numerous cases where the diagnosis has been as doubtful, and the result as unforeseen, as in M. Roux's patient. This eminent surgeon is inclined to think that the calculus is lodged in the ureter; and as no untoward symptom has occurred, and the patient, continuing to suffer the same pain as before, is anxious to have something done, M. Roux has made up his mind to penetrate into the bladder above the pubes. We shall give to our readers an account of this second operation and its consequences; it will, however, be practised only when the patient shall have thoroughly recovered from the first operation.

CASE X. *Partially encysted calculi.*

Mr. Duke related a case in which, although there was every evidence of a stone before the operation, yet, at the time of the operation, it was impossible to find it. On *post-mortem examination* there was found a sort of mamillary projection from the surface of the bladder, which, when that organ was full, stood erect, and allowed the stone to be felt with the sound; but, when the bladder was emptied, this projection collapsed, and was entirely covered as in a sac; four calculi, which were found, were thus perfectly concealed.

CASE XI. *Loss of the senses of hearing, sight, and smell, from tubercles developed in the origins of the third, fifth, seventh, and eighth nerves.* By Prof. Nélaton, of Paris. *Lancet*, 1833, vol. xxv.

Feret, a girl, twenty-one years of age, was admitted into the Hôtel Dieu on the 10th of March; the immovable expression of her countenance, her projecting and fixed eyes, and her slow manner of speaking, seemed to indicate the presence of idiocy in this female. She complained of constant pain in the head; six years ago she commenced to experience these pains, and since that period the sense of hearing has gradually failed, and within three months she has lost the power of smell. The sensibility of the skin remained unaffected, both on the face and rest of the body. Voluntary motion was freely exercised on both sides with vigor; the sense of hearing was nearly lost; the voice, which had become feeble when she first entered the hospital, was soon lost altogether; when the point of a stylet was moved along the surface of the ocular conjunctiva, it did not excite the least mark of sensibility, although the membrane was dry, and evidently much inflamed. The whole surface of the nasal fossæ might also be touched with a stylet introduced into the nostril, without the patient being conscious of it; ammoniacal paste, when placed under the nostril, seemed at first to produce no effect, but in a few moments excited efforts to cough. The peculiar sense of the tongue was however unimpaired, for the patient recognized salt when placed in the

mouth; the general sensibility of the tongue was also unaffected, and the gums were in a healthy condition. The patient died suddenly on the 3d of May. On *post-mortem examination*, the middle portion of the brain and the medulla oblongata were found much developed; the olfactory and optic nerves did not present any morbid appearance during their whole course; the fourth pair of nerves, the external oculo-motor of the left side, the glossopharyngeal and hypoglossal nerves seemed also free from any lesion; but all the other nerves of the brain were increased to at least three times their natural volume; small spheroidal tumors, of two or three lines in diameter, were developed in the interior of the nervous cords, or attached to their sides. Some of these tumors were perfectly well defined, though without cysts, and others were irregular in their forms. They were all formed by a yellow opaque matter, similar to that which is found in the centre of tubercles imperfectly softened, and the nerve itself suddenly contracted in size, after having traversed this tubercular mass. The two common motor nerves of the eye were implanted on the summit of a cone formed by this substance, which was also found in the fifth nerve on both sides, but at variable distances from their points of origin; a small tubercle, half a line in diameter, was attached to the origin of the external motor nerve of the right side, but the greater part of the nervous filaments passed above it, and were not altered. The seventh nerve was diseased from its origin to the bottom of the meatus auditorius internus; the pneumogastric nerve was also diseased in the same manner, for the extent of an inch below its exit from the foramen lacerum posterius; the optic and olfactory nerves did not present any morbid change of structure in their whole extent.

If our memory does not deceive us, it was a theory ingeniously advanced by the professor of anatomy in the University of Dublin, that the extremities of all the nerves of sense require to be joined by filaments from the fifth nerve, for the full exercise of their special functions; and upon this theory he ventured to predict that a connection would one day be discovered between the retina and filaments of the fifth nerve. The present case seems to support, in some measure, the supposition advanced by Dr. Macartney. One of the most remarkable phenomena was the loss of smell and vision, while the olfactory and optic nerves were perfectly healthy, and the fifth nerve was diseased; we are not, therefore, to conclude, as Magendie has partly done, that the branches of the fifth are, more properly, nerves of sense than of sensibility, or that the optic nerve does not belong to vision, and the olfactory to smell. But, if we are not inclined to adopt the above theory, we may explain the loss of sense as some of the French writers would, who consider it indispensable that the general sensibility, which depends on the distribution of the branches of the fifth nerve, should be preserved complete, and that when this sensibility is altered, the parts to which the nerves pass become irritated, inflame, and no longer act as proper media for the exercise of the senses; thus, in the present case, the mucous membrane covering the eye was inflamed, ceased to secrete the mucus or fluid which keeps it moist in a state of health, and became unfit for the transmission of light.

CASE XII. *Absence of the anus in a young woman.* By M. Ricord, Surgeon to the Venereal Hospital, Paris. *Lancette Française. Lancet*, 1833, vol. xxv.

The following interesting communication has been made to the editor of the *French Lancet*, by M. Ricord:—

I was consulted fifteen days ago by a young girl twenty-two years of age, who requested to be examined, saying that her lover accused her of having communicated to him a blennorrhagia, which was utterly impossible, as

she never had connection with any other person; she also asserted that she was not made like other women, and begged me in consequence to pay a little more attention than common to her case. Having been frequently consulted by many females on pretended deformities, which consist in nothing more than a slight prolongation perhaps of one nympha, or of the *carunculæ myrtiformes*, I am not in the habit of attaching much importance to their stories on this subject. The external genital organs did not present anything remarkable or morbid, and the speculum was immediately introduced with facility. The parts which embraced its extremity were perfectly healthy, and did not offer anything abnormal or morbid to the eye. However, the depth to which the instrument was carried without meeting the neck of the uterus began to excite some astonishment, when a lump of fecal matter was brought into view, simulating to the touch the os uteri, and also some grape seeds, which were at first taken for vegetations. Being now convinced that some malformation existed, as the girl had at first mentioned, I examined the organs of generation with the greatest care, and found the parts in the following state: The labia majora and minora, the clitoris and its prepuce were of the regular size, and well formed; the meatus urinarius was placed in its accustomed situation, and did not offer anything particular; the posterior commissure of the vulva and the fourchette were also in the normal state; but on examining the perineum, we could discover no trace of an anus; the place which the orifice should naturally occupy was marked by a brown spot, irregularly radiated, about the size of a shilling, and without any hair, although the *mons veneris* and vulva were overshadowed with a great abundance of this material. The ring of the vulva, which did not present any *carunculæ myrtiformes*, was furnished with eccentric folds formed by the mucous membrane, and exhibited a certain power of contraction much less than that of the sphincter ani, but much more powerful than that of the common constrictors of the lower part of the vagina. Beyond this vulvar ring the finger penetrated without causing any uneasiness into a kind of canal, which from its situation and functions deserved the name of recto-vaginal. The speculum, which did not produce the least pain when introduced, exposed to the view a mucous membrane, deprived of those transverse ridges so commonly found in the vagina; and when pushed on to its full length without meeting the least prominence or line of demarcation, it was arrested by fecal matter. When a finger was placed in this canal, while a female sound was introduced through the urethra into the bladder, nothing was felt between them except a septum, which might be compared to the utero-vaginal, or recto-vaginal wall. The toucher, exercised in every possible direction, and the speculum introduced to the greatest depth the instrument would permit, did not discover the least trace of a uterus. Upon questioning the woman with respect to the processes of defecation, menstruation, and sexual intercourse, I discovered the following particulars: the fecal matter was always passed by the vulva, and was perfectly under the command of volition, but gaseous fluids often escaped involuntarily: when the fecal matter presented itself at the orifice of the vulvar ring, she felt a desire to go to stool, and when this desire was satisfied, the finger introduced as deeply as possible, no longer met with any obstacle; the female besides has always taken care to use an injection immediately after, and to wash herself well, by which precaution she always kept herself clean. Menstruation has never made its appearance under any form, and no trace of blood has ever been discovered by her in the urine or feces. Although she has lived for three years with the same man, the latter has never appeared to have suspected or known the existence of any malformation; the first sexual intercourse which she had was not accompanied with any pain, for there never was

any hymen to break, and the construction of the vulvar ring was feeble in this young woman. She feels the desire of sexual intercourse; however, she says that, according to the account she received from her female friends, her own desires are less strong, and her enjoyment not so great as in others of her sex. Finally this girl is tall, slender, and well made; her form and physiognomy are those of the female; the bosom is well developed, and has never experienced since the age of puberty any sudden change of volume; her voice is soft and sweet like that of a female. Before we terminate this observation, the practical and moral consequences of which may be readily deduced, we may notice that in three days this young female, who was not ill at the time of her first visit, returned with a urethral blennorrhagia, without any affection of the vulva or recto-vaginal canal.

CASE XIII. *Stony covering of the skin.* By George Kitching, Surgeon. *Lancet*, 1834, vol. xxvi.

I have at present under my care, a man who is nearly incrustated with a stone-like skin, very closely resembling the barnacles of the native oyster, or what is called "rough-casting," so frequently seen on the outside of lath and plaster houses. This singular individual experiences no pain whatever from his affection, and the only inconvenience he suffers, arises from a sense of tightness and weight, accompanied by almost total want of sleep, as the recumbent position causes in him the sensation of lying upon a board thickly studded with nails, or as he expresses it, "lying on a bag of sticks." The first appearance of this covering occurred about six months ago, since which time it has been rapidly increasing, and little doubt exists in my mind but that, in a short time, if left to itself, the man will become as thoroughly incased in a hard coat as the armadillo or rhinoceros. I may add that he is rendered totally unable to provide for himself and family. The case being under my superintendence, I shall at all times have much pleasure in communicating on the subject with the scientific and humane. Allow me to subscribe myself yours, very respectfully.

CASE XIV. *Remarkable case of hirsute growth in a young woman.* By W. D. Chowne, M. D., Physician to Charing-Cross Hospital, London. *Lancet*, 1852, vol. i.

There are many facts interesting to medical science, connected with occasional growths of hair under abnormal, or what may be called incongruous circumstances. You are already aware that a person came to this hospital, requesting to have a testimonial as to the sex of the individual, whom some of you have seen, and who is the subject of my present observations. The request was accompanied by a statement that she was under an engagement to marry, but that the masculine appearance of her face produced scruples in the minds of persons who would otherwise have performed the marriage ceremony. Her name is J. B——; she is twenty years of age, a native of V——, in Switzerland, and by occupation a needlewoman. She states that at her birth she had, as she has been informed by her parents, a beard—that is to say, a considerable quantity of hair growing on those parts of the face usually occupied by the beard and the whiskers in men, except on the upper lip and on the hollow immediately under the lower lip. It was at her birth, she states, about as long and as thickly spread as it usually is on a man's arm; in other respects she was not different from other female children. The beard grew gradually, and when she had attained the eighth year of her age it was two inches long. At about eighteen years of age, catamenial functions

commenced, and have continued perfectly normal. She has had, and still has, very good health. Her occupations and dispositions are all womanly.

The hirsute growths.—At the present time, the beard and whiskers are what would be called very abundant, full, and strong, exceeding in quantity even that of the beard and whiskers of men generally in this country. It grows also on the parts covering the cheek-bones, under the eyes. Those parts of her face which were without beard at her birth, are still without. The hair forming the whiskers varies in length from one to four inches; that of the beard is about the same length. It is all strong, and rather coarse, as well as being very thickly set. She states that it does not require cutting. When she appears in public, she has a handkerchief folded three-cornerwise on her head, put on so that two of the corners pass down over the sides of her face, and meet just below the mouth, thus concealing the peculiarity. As the handkerchief cannot be worn so as to conceal that part of the face over the cheek-bones (as it would then cover the eyes also), she shaves that part. In her own village, where she was well known, she had no occasion for the handkerchief, but in a strange place she finds it necessary, lest the police should regard her as a man disguised in woman's apparel.

The hair growing from the crown and back part of the head is two feet and a half long, and that growing from the front part of the head is two feet. Both the front and back hair is moderately abundant, not excessively so. It is neither fine nor coarse; the color dark brown; that of the whiskers and beard the same.

On the neck and on the parts just below the clavicles, are numerous hairs thinly spread; much coarser and longer than the hair generally visible there in men. On the shoulders, arms, and forearms to the wrists, there is a quantity of hair, about equal to what would be found in a man moderately hirsute, but more uniformly spread over the whole circumference of these limbs. The mammæ and the whole of the sternal portion of the chest are quite free from hair, indeed quite fair. The breasts large, fair, and strictly feminine in all respects, including papillæ and their areolæ. On the back part of the shoulders there is also a good deal, and a tolerably broad line of dark hair extends down the back, sufficiently abundant to give quite a dark appearance in the line or depression over the vertebral column. The nates and the parts covering the tuberosities of the ischia, all have hair pretty uniformly spread, and in quantity about as much as would be on the limbs of a more than commonly hairy man. The anterior surface of the abdomen, extending from the umbilicus to the pubal and inguinal regions, has the masculine quantity, and the masculine distribution. The surfaces of the inferior extremities, to the ankles, are in the same state, excepting only the knees and hams, which are in the more ordinary state.

General form and voice.—She is of short stature. The form of the head is not remarkable. The upper part of her thorax and the pelvis are feminine; her legs and knees less so. The feet small. The arms and the hands small and feminine. She has not any malformation of any kind. Dressed as a man she would not have anything particular to betray her. Her manner, however, appears to be gentle, and would constitute a contrast to man's attire. Her voice, in conversation, is not remarkable either way. She sings occasionally, and then it is feminine.

She states that in her own country it was deemed that there must be within the abdomen, organs male in their character, both corresponding to the superfluous hirsute growth, and accounting for it. She was, at the time of my seeing her, about five months advanced in pregnancy. Besides the usual and less certain signs, the foetal cardiac sounds were audible.

Family, relations, etc.—She states that her mother's complexion was neither dark nor fair, but between the two. Her father was of dark (brown) complexion, and had not much beard or whiskers. Her mother's father was remarkable for having both whiskers and beard extremely large. She has one brother, man grown, who is, she states, almost entirely beardless; and two sisters not different from other young women. Her mother does not attribute the peculiarities to fright or other cause that she has any knowledge of.

Coexistence of the secondary indications of sex with malformation of the primary.—In almost all instances where the general contour or aspect, or other secondary peculiarities, indicative of the sexes, are blended in the same individual, obvious specific malformation, or excess, or deficiency, or a combination of the primary peculiarities of sex has been found.

In this case, however, there is a series almost complete of masculine indications or peculiarities of the general or secondary character, apparently in the entire absence of specific malformation, or excess, or deficiency, or combination, presenting an example to be classed amongst accidental growths of hair, rather than amongst such special growths as are the consequences of special physiological influences.

With reference to the possible existence of a concealed organ or organs in the subject of these remarks, it is worthy of notice that, although the superfluous growth is in some respects favorable to the supposition that such organs do exist, in other respects it does not favor that view. The beard, for example, existed at birth, and at eight years old was two inches long—thus anticipating the period of puberty instead of accompanying or following it, and proceeding altogether in advance, and apparently independently, of special organic influence. The beard was, and still is, confined to certain parts of the face, and is absent on others, where, in accordance with special influence, in a male, it should have been present, as on the upper lip and under the lower. On the whole of the anterior part of the trunk above the umbilicus, where, in accordance with the same influence, it should be even especially abundant, it is wholly or very nearly wholly absent. These circumstances conspire to weaken the supposition that there are concealed male structures, and to strengthen the probability that the superfluity of hair belongs to the accidental class.

CASE XV. *A bearded woman before the Medical Society of London. Lancet, 1853, vol. i.*

Dr. Chowne rose and said that in the course of the last year there had been published in the *Lancet* the case of a bearded woman, Josephine B——, who was brought to the Charing-cross Hospital by a person who stated that she was under an engagement to marry him, and that they wished to be married, but that the masculine growth of hair on her face prevented their being able to get the marriage service performed. Her case was referred to him (Dr. Chowne) as a medico-forensic subject, and under these circumstances, and there being every certainty that she was marriageable, he certified accordingly. He was sorry to add, however, that a public use had been made of the certificate, different from that for which it was given, a circumstance which he exceedingly objected to, and regretted; a use, indeed, not warranted by the circumstances under which it was obtained. On the 29th of last December, Eliza B——, aged 18 years and a half, presented herself at the Charing-cross Hospital; and it will be perhaps recollected that Josephine, the subject of his (Dr. Chowne's) lecture, published in the *Lancet* (as already alluded to), stated that she (Josephine) was the only person of the family to

which she belonged who had any similar peculiarity. This, however, appears not to be the case: and as Eliza, who represents herself to be the younger sister of Josephine, was waiting in the society's library, the society would have an opportunity of perceiving that, with regard to hirsute growth, she is almost the counterpart of her elder sister Josephine, and those who had seen both would scarcely fail to recognize a strong personal resemblance. He (Dr. Chowne) considered that the cases, even individually, were interesting; but that the birth of two such instances by the same parents would imply, either on the paternal or the maternal side, the occult existence of some inherent proclivity to the transmission of hirsute growth. Yet of any hereditary origin of such growths in these sisters, there are not any antecedent proofs, so far as can be ascertained. Neither the one sister nor the other has any knowledge, nor is aware of any tradition, relating to their family, further back than their grandparents. The elder sister (Josephine) stated that her mother's father was remarkable for a large beard, but the younger sister is not aware of his being so. They agree, however, in stating, excepting only as regards the mother's father, that there was not any peculiarity of hirsute growth amongst their grandparents; that their father was a dark man, but had not a full beard nor full whiskers; that their mother is neither dark nor fair, but intermediate or brown. They also agree in stating that the children of their parents are four, three sisters and one brother, and that a still younger sister and a brother are without peculiarity. Eliza B—— states that she is a native of Versoix, in the canton of Geneva, and that, as she is informed, she had at her birth hair on those parts of her forehead and face where it now grows, but that it was soft, and of comparatively faint color; that she had also on her back and limbs an abundance of soft hair. At about five years of age it began to thicken and become a little stronger, but did not grow full, and strong, and dark, as it now is, until about the fifteenth year of her age. The catamenial functions did not appear until she was about seventeen and a half years old; since which time they have been normal. The breasts, although not large, are perfectly womanly. Her head is rather large for a female of her age and stature, but there is nothing peculiar about the throat, as regards its circumference, nor as regards the prominence of the larynx. Her figure and the form of her limbs are feminine; her hands small; and the excessive growth of hair constitutes the only approach to masculine peculiarity about her. The hair on her forehead, face, and cheeks would, if allowed to grow, cover almost the whole of her face, except the nose, and the central parts of the upper lip. She states, that every eight or nine days she shaves the forehead, including a great part of the eyebrows, and also that part of the face from the eyes downwards, by the sides of the nose towards the angles of the mouth; but just above the angles of the mouth she permits the hair to grow. She has an abundant head of hair; that of the front and side of the head is two and a half feet long; that of the back part of the head the same. On the upper part of the bosom there is a small quantity of soft, downy hair. Over the back part of the neck and shoulders there is a considerable quantity of hair, and in the hollow formed by the muscles of the neck, and extending down over the spinal column, the hair is sufficiently abundant to cover the skin entirely, and indeed to admit of its being taken up in something like considerable quantities between the fingers. Her limbs, excepting her hands and feet, have a profusion of hair upon them. Her disposition and habits, and occupation, are all those of the female. She has the reputation of possessing great kindness and gentleness of temper. Reverting to the question of hereditary origin, the subject is necessarily one of great obscurity; but still, although

it is impossible to have any idea of when—that is to say, in what antecedent generation of the family of these young women—hirsute peculiarity existed, yet that such a peculiarity has existed is a fair presumption, for we know how entirely dormant certain hereditary influences may remain through several generations, and still not be extinct. That there has been an hereditary origin is the more probable, when we bear in mind the number of “bloods”—to use a legal expression—or in other words, the blood of how very numerous a lineal parentage runs in the veins of every man. In the first step of ascent, in the lineal line, he has his father and his mother; in the next step he has four, their fathers and mothers; one step further and he has eight great-grandparents; proceeding thus, even by the time he has numbered the seventh degree he has 128 ancestors; 1024 in the tenth; and in the twentieth degree or generation above a million. Thus the difficulty of dealing, not only with hereditary diseases, but with actual personal likeness, and peculiarities such as that now before the society, is extremely great.

CASE XVI. *Complete obliteration of a portion of the thoracic aorta; death.* Medicinische Jahrbuch—Lancet, 1841, vol. lxi.

A superior officer in the Austrian army, of great merit, and who had been engaged in the wars from 1790 till 1815, had lived well and in good health till his forty-fifth year. He retired to Mentz, where he lived in repose. At this epoch he complained frequently of dyspnoea and gastralgia, but he did not seek advice till he had experienced several attacks of impediment to his breathing, and when his stomach refused every species of nourishment. It was treated in vain during a year by homœopathy. Violent palpitations succeeded, accompanied with œdema of the extremities. The prolonged use of bismuth, joined with digitalis, diminished in a degree the vomiting and dyspnoea; but there always remained a disturbance in the action of the pulse, the beats were rapid and tremulous, though full. Towards the end of his life hoarseness and a dry cough supervened. Finally, in his fiftieth year, the patient died suddenly in the midst of a game of whist.

Autopsy.—A remarkable softening of the brain existed, the encephalic vessels were nearly exsanguious, and the basilar artery was ossified. At the base of the cranium four ounces of serum were collected. The heart was hypertrophied; the valves sound. The arch of the aorta, as far as the origin of the arteria innominata, was dilated to nearly double its normal calibre. The subclavian and left carotid were not dilated preternaturally. The coronary arteries were ossified for two or three inches. Beyond the origin of the innominata the arch of the aorta gradually contracted to the point where the venous canal terminates, and where its diameter did not exceed half an inch. Here the obliteration of the aorta began, and continued to the extent of half an inch. The pectoral and abdominal portions of the aorta were not larger than in a child ten years old. The parietes of these arteries were manifestly thickened. The intercostal arteries which arose below the obliteration, had a diameter of nearly a quarter of an inch, and communicated freely with the mammary and thoracic arteries. By these means the collateral circulation was kept up. The pulmonary arteries were dilated.

CASE XVII. *Pupæ and larvæ of insects in the alimentary canal.* Lancet, 1840, vol. xxxviii.

To the Editor of the Lancet.

Sir: The presence, in man, of other intestinal invaders than those which are usually recorded (such as tæniæ, ascarides, etc.) has often engaged my at-

tention; but although cases are published of the larvæ of various insects being rejected,* I have not met with any instance of the like myself. I am, however, disposed to believe that a variety of insects occasionally exist in the digestive apparatus, and become a source of ailment more frequently than we are aware of. The following remarks are principally directed to the pupa or larva or pupa (I must leave the entomologists to determine which is correct) of a *Musca*. Some months back my friend, Dr. Bird, requiring some urate of ammonia for experiments, I procured, through the kindness of Mr. Cross, of the Surrey Zoological Gardens, some two or three ounces from his boa constrictor. My engagements prevented me calling for it until some days after it had been passed, and I then found it pretty thickly infested with some pupæ; they were alive, and had evidently, as ascertained by inquiry, been passed with the urate. I submitted some to my friend, Mr. Curtis, the entomologist, who wrote to me thus: "There is not the least doubt they are the offspring of a *Musca*, and probably the *M. Canicularis*, Linn., which will be the *Anthomyia* of modern dipterists." The occurrence interested me, and upon looking over the second volume of the memoirs of the Medical Society of London, I found the seventh article to be "the case of a patient who discharged the pupa of the *Musca Cibarica*." The case here recorded is that of a man, about thirty years of age, who had for some time been out of health, with much disordered action about the liver, irregular appetite, &c., and whose symptoms appear to have subsided upon those pupæ being rejected; and it is recorded that he discharged "an immense number." This case is accompanied by a colored engraving, which is nearly sufficient to identify the pupæ with those passed by the boa.

A case is recorded by the Rev. L. Jenyns, in which the larvæ of a dipterous insect, supposed to be the *Anthomyia Canicularis*, Meig., were expelled in large quantities from the human intestines. The patient (a clergyman) was under the care of Dr. Haviland, of Cambridge. In the spring of 1836, this gentleman, who was about seventy years old, complained of "general weakness, loss of appetite, and a disagreeable sensation about the epigastrium, which he described as a tremulous motion." In the summer and autumn of the same year, he passed very large quantities of the larvæ, and, according to his own statement, the chamber-vessel was sometimes half full, and he thinks that altogether he must have passed several quarts; they were alive, and when they ceased to pass his health improved, although at the time this account is given (March, 1837) he believed more were still in his stomach and intestines. In the seventh volume of the *Edinburgh Medical and Surgical Journal*, two cases are recorded by Dr. Bateman which bear somewhat on the subject in question. It will be interesting to know how such insects are taken into the stomach; most probably, in the case related by the Rev. L. Jenyns, they gained access with the solid food, for the clergyman "had never drunk water unmixed, but generally beer, tea, and such beverages;" at the same time, the water used was entirely supplied from a pond on a stiff clay. It will also be important (if a parallel case be met with) to obtain information as to the best means of rapidly destroying them, for the clergyman above mentioned was passing them for several months. The larvæ of the gad-fly are stated, on authority,† "to exist in the stomach of the horse during the whole of the winter to the end of the ensuing spring;" and that "they cannot be injurious, for the horse enjoys the most

* For example, see the case of Mary Riordan, Trans. of Assoc. Phys. Ireland, where nearly 2,000 larvæ of the *Blaps Mortisaga* were reported to have been discharged.

† See Library of Useful Knowledge, art. "The Horse," p. 201.

perfect health when the cuticular part of his stomach is filled with them;" but I must acknowledge myself a septic concerning this latter statement. At any rate, it is very clear that all the human subjects traced to suffer under the invasion of the larvæ I have noticed, have been, more or less, deprived of health by the irritation and general disturbance they have produced.

I am yours, &c.,

Newington, July 8, 1840.

W. T. LIFF.

CASE XVIII. *A woman nearly eaten up by lice.*

M. Marchilli, surgeon, member of the Institute of Genoa, published the following case in the memoirs of the Academy of that city: A woman, aged 49 or 50 years, of a robust constitution and of excellent spirits, mother of eleven children, and never sick but from frequent attacks of erysipelas, besides three miscarriages, unfortunately had parasites (*pediculi*) communicated to her head, in using a comb which did not belong to her. She used means (*veratrum sabadilla*) which had been successful in destroying these insects before, but they continued to multiply so rapidly that, though six or seven hundred of them were killed several times a day, there was scarcely any relief. They presented, too, different colors; some were white, gray, black, reddish or yellowish, and mostly very small. Decoction of tobacco, vinegar, etc., having failed, and the use of the comb to remove or kill them, her hair was cut and the head shaved. Some relief was thus obtained, by using the razor every second day, but soon some appeared on the pubes. In April, 1799, she detected them passing from the anus, and camphorated vinegar, with decoctions and oil in enemata were prescribed, with some advantage. The surgeon-general of the French army, in Italy, recommended mercury, which, instead of destroying them, made them discharge by thousands.

The lice were now found attached to the shoulders and neck of this unhappy patient. Musk, camphor, onions, strong aromatics, were tried in vain; then, frictions of turpentine, which caused a severe erysipelas. M. Marchilli, curious observer of a case so rare and extraordinary, examined the skin with a magnifying glass, but discovered no ulcer, no scab, or tubercle; in fact, nothing to protect the eggs of these little parasites, either upon the surface of the body, at the anus or the ears, from which latter organs they were now discharged in great numbers. Submitted to the microscope, the author could perceive no difference between them and the *pediculi humani* of Linnæus. He tried experiments with various substances to destroy them, without arriving at anything definite. The patient having lost flesh, was put upon tonics, but the pedicular affection remained still obstinate, at which period our author lost sight of the case.

CASE XIX. *An immense number of lice on a woman.* By Dr. Fournier. Dictionnaire des Sciences Médicales.

In the eighth year of the French Revolution, twenty days after delivering a lady, and eleven days after I had ceased to visit her, this patient sent for me. She was seated near the fire, and in the position of a sufferer. She was pale, thin, and her infant, who sucked, scarcely breathed. Eight days ago, she said she experienced such a headache as to deprive her of appetite and sleep. The head, which was covered until now, exhaled a cadaverous odor, and there were observed in the hair, pus, and an immense number of big white lice. Supposing she had an attack of rheumatism, she had kept her head covered for eight days. The scalp was greatly tumefied, and there were several openings in it from which escaped pus, and the parasites which were devouring the patient. There was a prodigious number of them, and they presented a

most disgusting sight. The hair was cut, soap and an infusion of elder were freely applied to the head; Peruvian bark and proper nourishment prescribed, with red wine, and the patient soon recovered.

This lady was remarkable for cleanliness, and had combed her hair both before and after her accouchement.

CASE XX. *A naturalist colonizing insects upon his own person.* Dr. Eliotson's Lecture in the *Lancet*, 1831, vol. xix.

I may mention, while on this subject, that there was a naturalist, a great entomologist, and a very clever man, who had an eruption in another part of the body, which he could not understand. He was not in practice, though a physician. He went to Mr. Abernethy, who at once told him his eruption arose from vermin. They were not of the same description, but inhabited a warmer climate—a more southern region—nearer to the *equator*—and if you like to name it from its inhabitants, the tropic of *cancer*, and they, like other inhabitants of warm climates, were of a *darker* hue. The naturalist had wished to observe the habits of those creatures, and for this purpose had procured, he told me, a few, and transferred them to the spot which he knew was their proper soil, and he had afterwards entirely forgotten the circumstance. They, however, increased and multiplied, and replenished the spot, and great irritation of the part came on, followed by an eruption, rendering him very miserable. It is curious enough that, though he was a naturalist and great entomologist, he had not the slightest idea of the cause of his sufferings, nor recollected that he himself had been the instrument of emigration and colonization. A single good powdering with white precipitate, or at the utmost two, washed off at the end of half an hour, never fails to exterminate the tribe.

CASE XXI. *Pedicular disease in a man.* D. Meredith Reese, M.D. Notes on Hospital Practice—*American Journal Med. Sciences*, 1850, vol. xix.

This affection is happily rare in this country; but a few cases have occurred in the hospital, one of which was as remarkable as any recorded in the foreign books. The patient was not merely covered with living lice upon every square inch of his body, but they were constantly issuing from the pores of his cuticle, beneath which they existed in incredible numbers. By scraping any part of his skin with a stick, or any other solid body, hundreds of living lice would fall out of the abraded cuticle, and might be collected upon a sheet of paper, as was several times done, for exhibition to visitors. In other respects, the man was in tolerable health, but so stupid that but little of his history could be learned, and nothing of the origin or duration of the disease. He was cured by the external application of dilute ung. hydrag. nitr., with a very slight ptyalism.

CASE XXII. *Female eunuchs in India.* *Lancet*, 1843, vol. xlv.

Every one knows the cruel acts to which Oriental jealousy has given rise with respect to the male attendants on the harems of the great; but few, perhaps, are aware that in India, even women are subject to a process, not of emasculation, but (if we may coin a word) *effemination*. Dr. Roberts, the author of a memoir of a journey from Delhi to Bombay, says that near Feridabad he was met by an eunuch fakir and three singing girls, the latter of whom executed several dances, accompanying them by their voices. The lofty stature, harsh voices, and bold masculine movements of the damsels so terrified the worthy doctor, that he at first thought them to be Thugs in disguise; but when he had ascertained their true sex, curiosity overcame his

terrors, and by dint of a little persuasion and sundry rupees, he prevailed on the ladies to visit him at his tent, and exhibit their physical peculiarities. They appeared to have no development either of the larynx or nipples; the vaginal orifice was obliterated without even the trace of a scar, while the meatus urinarius, on the contrary, was salient and exposed; there was no *mons veneris*, and, in fact, a complete atrophy of the areolar tissue, not only in the genital but other parts also of the body, and no hair whatever on the parts usually so covered; the buttocks and thighs were not more spread than in the male; there was no trace of, or substitute for, the menstrual discharge; nor had the individual any venereal desires. Large, robust, and muscular, they enjoyed excellent health, being about twenty-five years old; and their chief occupation was that of itinerating the villages, dancing, singing, and circumcising the male infants of the native population. They had no recollection of having undergone any operation, nor could Dr. Roberts find any indications whereby to judge of the manner in which they had been unsexed; but they said (what he knew not himself and could not ascertain from others) that many females similarly situated were to be found at Delhi and Agra. An old Brahmin, at Indore, in Malwah, afterwards told Dr. R. that these women, called *hedgirahs*, are punctured in the ovaries with needles, dipped in the green fruity juice of the tree called *bhel-poul*.

CASE XXIII. *Calculi of the pancreas causing death by internal hemorrhage.* By O. M. P. Clayton. *Lancet*, 1849.

Mr. J. R——, aged forty-seven, an inspector of police, eighteen months before his death consulted the author relative to frequently recurring dyspeptic symptoms, and a deep-seated pain at the epigastrium. Two or three months later, during an unusually severe paroxysm of pain, hæmatemesis to a considerable amount occurred. The attacks of pain recurred at intervals of two or three weeks, and when severe, were followed by more or less of hæmatemesis. Emaciation, at the same time, slowly increased. His death was attended by symptoms denoting some lesion, probably hemorrhage, within the abdomen. On *examination of the body*, twenty-six hours after death, coagulated blood in large quantity was found in the peritoneal cavity. The liver and alimentary canal were healthy; but the pancreas was much enlarged, and contained numerous calculi lodged in the dilated trunk and ramifications of the excretory duct. The duct itself presented an opening through which the largest calculus had escaped into the cavity of the abdomen. This calculus, two-thirds of an inch in length, consisted of carbonate of lime, with traces of phosphate of lime, animal matter, and fat.

CASE XXIV. *Curious case of neuroma; death.* *Lancet*, 1852.

M. Houel has brought before the Surgical Society of Paris a remarkable case of neuroma, affecting all the nerves of the frame. Before entering into particulars, M. Houel stated that six analogous cases have been recorded. Two of these were noted by M. Serres, in 1847; he calls them, in the *Comptes Rendus* of the Academy of Sciences, "ganglionic transformations of animal and organic life." Two other cases were reported by Schiffener and Wurtzer; and Professor Smith, of Dublin, has cited two examples of the kind in his excellent work on "Neuroma."

The patient, in the present instance, was admitted into the clinical hospital of the faculty, March 16, 1851, for the removal of a tumor situated in the right groin. Other tumors were found on the abdominal walls, on the neck, on the arms, and in the axillæ; the patient, however, was not aware of having so many tumors upon him, as they never had given him much pain. The

tumor in the groin made walking uncomfortable, and became somewhat painful, with changes in the weather. This was removed by M. Giralès, on the 1st of April, 1851, and the wound took three months to cicatrize. The patient was re-admitted some time afterwards, and died on Dec. 17, 1851, no further operation having been attempted, owing to the great number of the tumors.

No pain in the neuromatous growths was ever complained of, and great emaciation preceded the patient's death.

On an *inspection of the body*, all the viscera were found healthy, and neither the brain, cerebellum, nor spinal cord, contained any tumors. In the cauda equina, however, there were a great number, as many as twenty being found on one single filament. Bischoff has recorded an analogous fact; and he had even found neuromatous growths on the roots of the cerebral nerves, one of the tumors on the seventh pair, before it leaves the skull, being of the size of a small strawberry.

M. Houel did not find the nerves affected at their intra-cranial origin, but further on they presented numerous neuromatous growths, with the exception of the olfactory and optic nerves. There were likewise tumors on the motor oculi, and on the fourth nerve; the fifth also presented several neuromatous growths on each of its three divisions; they were especially numerous on the lingual and infra-orbital nerves. The distribution of the tumors was pretty similar on both sides; the seventh pair presented many growths along its distribution on the face, but the pneumogastric had the greatest number of them, and looked like a coral necklace. There were also many such tumors on the œsophageal, pulmonary, and cardiac plexuses, and all the spinal nerves were the seat of neuromata immediately after their leaving the spinal foramina.

M. Houel found a great many tumors on the cervical plexus, both as to the superficial and deep branches; the brachial plexus had also a great many, and upon a nerve belonging to this plexus the largest neuroma was found, it being about the size of a hen's egg. All the terminal branches on the right and left were studded, and the dorsal nerves bore numerous traces of this fibrous diathesis, as M. Houel calls it. The ribs had, in several places, been affected by the growth, and portions of their substance were found here and there absorbed.

The lesion seemed to be more complete as regards the lower limbs, for the lumbo-sacral plexus presented on either side more neuromatous tumors than the axillary; the sciatic nerve had a great many, and looked as if hypertrophied. M. Houel drew the attention of the Society to the fact that the nerves had assumed a varicose aspect; they looked longer and somewhat twisted, and it was easy, during the dissection, to unroll them, when they were seen to resume their normal direction. The great sympathetic was much enlarged, but there were no growths upon it. Some of these were, however, found on the splanchnic nerves. On a microscopic examination, M. Robin found these tumors composed principally of fibrous tissue, and noticed in them very few fibro-plastic elements.

CASE XXV. *Hypertrophy of the mammæ; their weight over fifty pounds; amputation.* Lancet, 1851.

The following case lately came before the Academy of Medicine of Paris: S. B., of a good constitution, began to menstruate at eighteen; four months afterwards the catamenia disappeared almost completely, without any known cause. The mammæ, which hitherto had been small, became painful, and grew so large that, at the end of one year, the left breast measured fifteen

inches from the base to the nipple, twenty-seven in circumference in the centre, and twenty-two around the root. The size was almost the same on the right side. Large veins ramified on the surface, and indurated nodules pervaded the substance. In 1844, three years after the beginning of the affection, M. Rouyer saw the patient: at this time the abdomen was completely covered by these gigantic tumors, which hung down as far as the knees; the presumed weight of each being about thirty pounds. The patient had thereby been confined to bed for the last two years.

Removal being deemed advisable, the left breast was removed, with every precaution as to the loss of blood: the patient, nevertheless, had hemorrhage to the extent of forty ounces. Twenty-six days after this operation, the right breast, which had in the meanwhile considerably diminished, was likewise amputated. The left mamma weighed thirty pounds and a half, the right twenty and a half; and both were composed of fat and degenerated portions of the gland. The total weight of the patient had been lessened by one-third. M. Robert, who reported on the case, stated that he considered the affection as non-malignant; and that the fact of the remaining breast diminishing in size after the removal of the first, would in a similar case make him wait for a few months before performing the second operation, with the hope that the unremoved breast might become atrophied.

CASE XXVI. *Face of a man eaten by a pig; recovery.* Dr. Houston's Catalogue of the Museum of the College of Surgeons, Ireland. British and Foreign Med.-Chir. Review, 1841, vol. xxxiv.

Picture of a man whose face was eaten away, by a pig, while lying in a state of drunkenness. The entire nose, both cheeks, and parts of both ears, in fact, all the most eatable parts of his face were chewed off by the animal; nevertheless, the wounds all healed, and he recovered: but of course with all the disabilities of enunciation, chewing, and swallowing, attendant on such extensive destruction of soft parts. He, notwithstanding, under generous regimen contrived, while in the hospital, to keep up a good condition of body. His principal regret lay in the unavoidable disuse of his tobacco-pipe. The picture exhibits him after the wounds had all healed, without outward nose or ears, but with two beautifully white and perfect rows of teeth.

CASE XXVII. *Case of a supposed hermaphrodite.* Journal de Montpellier. British and Med.-Chir. Review, 1841, vol. xxxv.

M. Benoit was consulted last year by Marie B——, 27 years of age, and registered in one of the towns of the department of Tarn as a girl.

When 14 years old she became aware that there was some peculiarity in the conformation of her genital organs, and she therefore applied to a medical man, who assured her parents that a simple operation would set her all right. An incision was made for the purpose of re-establishing the opening of the vagina; but this not being found, nothing else was done. Shortly before consulting M. Benoit she had been asked in marriage, and at first refused the offer; but, as her lover persisted in his addresses, she at length declared the cause. The account which she gave to M. Benoit was as follows; when about 14 years of age, she observed in the right inguinal region a small swelling, which was very painful for some time, but disappeared soon afterwards. Although she suffered considerably from headache, languor, and general uneasiness, there had never been any sanguineous discharge. Below the mons Veneris, which is altogether similar to that usually observed in women, there is a fissure terminated on each side by two thin corrugated labia, which are slightly covered with hair, and stretches backwards towards the anus. This

fissure is only about three-quarters of an inch deep : its anterior commissure terminates in a diminutive penis-like organ, which is provided with a prepuce, a glans, and two cavernous bodies, but is without any terminal aperture ; it is subject to erections, and becomes then considerably longer. At the root of this organ, on its inferior surface, there is an opening which communicates with the urethra ; constituting, therefore, the *vitium conformationis*, known by the name of hypospadias. This opening, at rather less than three inches from the anus, leads into the bladder by a canal which is curved, as in the male subject ; but is only about three inches long. When a sound is introduced into the bladder, and a finger passed up the rectum, there seems to be only a thin septum between them, but not any trace of prostate gland. In the inguinal region (it is not stated on which side) there is a small round and movable body under the integuments.

From this state of parts, M. Benoit gave it as his opinion that the sex was male, and that his patient was incapable of contracting marriage.

CASE XXVIII. *Abolition of all the senses ; the intellectual faculties being preserved.* By M. De Fermon. Bulletin des Sciences Médicales—American Journal Med. Sciences, 1828, vol. iii.

M. C. J., a Corsican, allied to the family of Napoleon, of a nervous temperament, rich, a wit, a lover of the fine arts, and a devotee of pleasure, which had been indulged in to excess, was attacked with difficulty of vision, which soon terminated in complete amaurosis. Having suffered in his youth from syphilis, he was put on a course of mercury, without any benefit. Afterwards, he tried numerous remedies under the best physicians in France, but to no purpose. Notwithstanding this blindness, he continued to fulfil his functions as financier, and acquired such a tact that he could distinguish engravings on copper from wood-cuts, lithographs, etc., by the fingers alone. In short, he enjoyed society nearly as much as ever, and hardly felt the loss of sight. But in a few years he began to grow deaf of one ear—then of the other, and in a short time, he had to add the total loss of hearing to that of sight ! By means of large movable types or letters, which his family put together, he was soon able to read with his fingers whatever was wished to be communicated, and by this contrivance he still held free intercourse with the external world. All his intellectual faculties remained unimpaired, and his memory was extremely tenacious. But new misfortunes were in store. Muscular motion and sensibility began to fail, and, in a short time, they were completely extinct ! He was now, as it were, exiled from the earth, in the midst of his family and friends ! He could speak ; but no answer, no sign, no impression could he receive through any channel of sense ! In this deplorable condition, it was accidentally discovered that a small portion of one of his cheeks retained its sensibility, and the active imagination of the sufferer soon took advantage of the discovery. He caused one of his sons to trace letters on his cheek as he dictated them, and by constant repetition he was soon able to recognize these letters as traced on the sensible part. He made such progress, that, in a few days, his son wrote on his father's cheek the speech of the King of France, on his return in 1815, the whole of which was completely understood ! With this sole solace of a dreary death in life, he dragged out some time in a state of the greatest misery that can well be imagined—his intellectual faculties not appearing to suffer the slightest degree of decay. At length the unfortunate patient became enfeebled, the fecal matters escaped involuntarily, and after many years of suffering he succumbed. No autopsic examination was made.

CASE XXIX. *Infanticide by omission.* American Journal Med. Sciences, 1829, vol. v.

Can infanticide be committed on the body of a child that has never breathed? The April number for 1829, of the *Nouvelle Bibliothèque Médicale*, contains an important decision of one of the French tribunals on this disputed point of medical jurisprudence. It appears that the woman had been delivered, but had made way with the infant; this she accounted for as follows: "She declared that, if she had brought forth a child, it must have been the evening previous whilst in the privy: that, in fact, at that time she felt her body open (*senti son corps s'entr'ouvrir*), but that she was not sensible of any infant being born." On search being made, the body of the child was found in the privy, and an examination instituted by a physician. He found, 1st. "That it was born at the full time, viable, and well formed. 2d. That nothing demonstrated whether it had been deprived of life before or after birth. 3d. That it never breathed after its birth, which appeared to have been the cause of its decease." The physician also added that, "it is erroneous to consider that life cannot exist without respiration. When a child is first born, it may preserve its extra-uterine life, which, although not an individual existence, certainly is not death." On this report, the tribunal declared "that the child neither died before nor after birth, and that want of respiration prevented its continuing to live." Such is the extraordinary decision of the court, embracing one of the most complete paradoxes we have ever met with. It declares that the child did not die, yet convicts the mother on account of its death. It also declares that it did not die either before or after birth, and hence, should still be living. We do not object to the principle of responsibility in such cases, but, certainly, the decision of the court might have been based on more rational grounds.

CASE XXX. *Suicide or homicide; a right-handed man cutting his throat on the right and not the left side.* American Journal Med. Sciences, 1852.

A case occurred at the University College Hospital, under the care of Mr. Erichsen, of a man who attempted to destroy himself by cutting his throat. The patient is progressing favorably, but there is a peculiarity in the case which might have been of great importance had he succeeded in killing himself. It appeared that he seized the cutting instrument with both hands, and inflicted a wound on the *right* side of the neck. Now, it is generally held, that unless a man is *left* handed, he cannot do this; and had the man died under doubtful circumstances, it might have been argued, that the wound was inflicted by a second person, and suspicions might have been raised against perfectly innocent persons. Mr. Erichsen stated that a case of a similar nature was received into the hospital some years since. These facts are certainly of great value, and should be carefully noted.

CASE XXXI. *Air in the veins.—Entrance of air by an opening in the internal jugular vein; recovery.* American Journal Med. Sciences, 1843, vol. v., N. S.

We select this as a good illustration of this subject.

"Dr. Asmus was removing a steatoma as large as the two fists from the region between the lower jaw and clavicle of a man forty years old, and was very carefully separating its base from the carotid artery with which it was in contact, when he accidentally opened the internal jugular vein, which had been pushed far from its usual place by a lobe of the tumor. No blood flowed; but on the instant he heard the air enter the vein with a bubbling sound. He asked the man how he felt, who said, 'Well,' but the next moment cried out, 'It's all up!' and began to be convulsed, first in the face, and then in the

whole body. He sank down, and at the same instant another bubble was heard; but still no blood flowed. Alternate convulsive movements and opisthotonos ensued; the face was deathly pale, the breath short, and death seemed close at hand. Rapid bleeding now took place from the wound, and a stream of black blood was seen to issue from the vein, but as often as the patient was convulsed, air again passed in, and the bubbling was distinctly both seen and heard. A ligature was as quickly as possible put upon the vein above the injured part, and with this the bubbling ceased; the tumor was cut off level and the patient was put to bed.

"Syncope, alternating with severe convulsions, still continued; the pulse was not discernible, the heart seemed only to vibrate, and the respiration was short. Stimulants and a variety of restorative means were employed, and about twelve hours after the operation (in which the loss of blood was altogether moderate), the patient began to revive. His condition continued to improve, and he at length completely recovered."

CASE XXXII. *Attempt to convert a boy into a girl.* By Prof. Samuel D. Gross, M. D., Prof. of Surgery, Jefferson Medical College. Transactions of the Kentucky State Medical Society.

"A very novel case, justifying, in my opinion, excision of the testes, came under my observation in 1849. So far as my information extends, there is no account of any operation for a similar object upon record. The patient, at the time I first saw her—she had always been regarded as a girl, and had been so pronounced by the accoucheur—was three years of age, having been born on the 10th of July, 1846. At the age of two, she began to evince the feelings and disposition of a boy; she rejected dolls and similar articles of amusement, and became fond of boyish sports. She was well-grown, perfectly healthy, and quite fleshy; the hair was dark and long, the eyes black, and the expression very agreeable. Upon making a careful examination, I found the external genitals in the following very singular condition:—There was neither a penis nor a vagina; but instead of the former there was a small clitoris, and instead of the latter a cul-de-sac, covered with mucous membrane. The urethra occupied the usual situation; the nymphæ were unnaturally small; but the labia were well developed, and contained each a testis, quite as large, consistent, and well-shaped as they ever are in boys at this age.

"It being apparent from the facts of the case that it was one of monstrosity of the genital organs, usually denominated hermaphroditism, the question at once occurred whether anything ought to be done to deprive the poor child of that part of the genital apparatus, which, if permitted to remain until the age of puberty, would be sure to be followed by sexual desire, and which might thus conduce to the formation of an unfortunate matrimonial connection. Such an alliance, it was evident, would eventuate only in chagrin, disappointment, and, probably, in disgrace. Certainly no impregnation could ever occur, and even copulation could be performed but imperfectly. I gave all the consideration that I was able to bestow upon it; I felt the responsibility of my position; a new question, involving the happiness of my little patient and the deepest interests of her parents, was presented to me. I appealed to the records of my profession, but in vain, for a precedent. Under the circumstances, I sought the advice of a medical friend, Professor Miller, in whose wisdom and integrity I had unwavering confidence; he saw the child and examined her; he viewed the case as I had done previously, in all its aspects, physiological, legal, and surgical, and his conclusion was that excision of the testes would not only be justifiable, but highly proper; that it would be an act of kindness and humanity to the poor child to deprive it of an appendage of so useless a nature, one which might ultimately lead to the ruin

of her happiness. The parents were already solicitous for an operation, and having imparted to them our decision, I no longer hesitated in regard to the course I ought to pursue.

"I performed the operation of castration on the 20th of July, 1849, aided by my pupils, Dr. D. D. Thomson, of this city, Dr. Greenbury Henry, of Burlington, Iowa, and Dr. Wm. H. Cobb, of Cincinnati. The little patient being put under the influence of chloroform, I made a perpendicular incision into each labium down to the testis, which was then carefully separated from the surrounding parts, and detached by dividing the lower part of the spermatic cord. The arteries of the cord being secured with ligatures, the edges of the wound were brought together with twisted sutures, and the child put to bed. Hardly any blood was lost during the operation. About two hours after, the left labium became greatly distended and discolored; and, upon removing the sutures, the source of the mischief was found to be a small artery, which was immediately drawn out and tied. No unpleasant symptoms of any kind ensued after this, and in a week the little patient was able to be up, being quite well and happy. The testes were carefully examined after removal, and were found to be perfectly formed in every respect. The spermatic cords were natural.

"I have seen this child repeatedly since the operation, as her parents live only a few squares from my office, and have watched her mental and physical developments. Her parents, who are persons of observation and intelligence, assure me that her disposition and habits are those of a girl; that she takes great delight in sewing and housework, and that she no longer indulges in riding upon sticks and other boyish exercises. Her person is well-developed, and her mind uncommonly active for a child of her years."

We present the comments of our colleague, Prof. Bowling, on this most extraordinary operation:—

Here, again, is a singular warfare, an irreconcilable conflict between Prof. Gross's premises and his conclusions. The first thing to be determined in this case, so far as it is practicable, is whether the child was a girl or a boy. "The testes were carefully examined after removal and were found to be perfectly formed in every respect." This, we think, determines the sex of the child beyond all controversy. It was a boy.

If, as Dr. Meigs reiterates for the fiftieth time, "for the female stroma is sex," it will not be denied that for the male *testicle* is sex. But Prof. Gross says "*she* had been always regarded as a girl, and had been so pronounced by the accoucheur." This amounts to nothing when opposed to his demonstration that *she* was a boy. Still the author pertinaciously refers to the case in the feminine gender, while he styles the operation a castration. It is not shown that he entertained the remotest idea that there was a vagina, a uterus, or an ovary. There did not, therefore, exist, even in imagination, the slightest evidence of the female sex, but on the other hand unquestionable and indubitable testimony that the subject was a male. Against palpable and open demonstration upon the one hand, is opposed, upon the other, the fact that "*she* had been always regarded as a girl, and had been so pronounced by the accoucheur." We are assured that "the testes were perfectly formed in every respect." After the most anxious solicitude, inquiry and consultation, Prof. Gross determines upon castration, and he frankly states the prominent considerations which influenced his conclusions. These were:—

1st. The certainty of the development of sexual desire at the age of puberty. And, as a consequence of this,

2d. The probability of the formation of an unfortunate matrimonial connection.

3d. That such a connection could but result in disappointment, mortification, and perhaps disgrace, as,

4th. No impregnation could ever occur, and even copulation could be performed but imperfectly.

In this whole train of reasoning it is manifest that the Professor still had in his mind's eye a girl and not a boy—for if the latter, copulation, instead of taking place imperfectly, could not take place at all, for there was no penis, and in its place only a "small clitoris." It is perfectly clear, then, that the author means by imperfect copulation such a sexual congress as a male organ could achieve by means of a cleft scrotum, or cul-de-sac covered with a mucous membrane of another male.

We would beg permission respectfully to examine the validity of these reasons.

1st. We cheerfully agree with the author, that at the age of puberty, in this case, sexual desire would have arisen, but we deny every inference, in part and in whole, which is deduced from this postulate. That this sexual desire would possibly have led to a matrimonial connection with a *man*, as Prof. Gross clearly infers, is an absurdity too gross to admit of serious argument. Such desire would have led the subject in this case to have looked to *woman* for the means of gratification, for the instinct resident in a brace of well-developed testes could not be expunged by all the paraphernalia of the wardrobe of the Queen of Sheba, or the asseverations of all the midwives, male or female, upon earth that the subject was a girl. But suppose in this we are mistaken, and that unimaginable changes might have been wrought in this child in the long period from childhood to puberty, by dress, education and association, and that upon the development of new and delicious feelings, the heart should have gone out in company with those of female associates, in the delightful chase of love; would not the ear have inclined, like those of the companions, to tales with which men know so well how to besiege and subdue the heart of women, and thus have been in danger of being inveigled into matrimony with *man*? We think not; for, admitting the full force of these influences upon this *lusus naturæ*, puberty would have wrought changes upon the exterior of the body which would have secured it against such dangers more effectually than all the surgeons' knives from Ambrose Paré to Gross. The testes were perfectly formed. Will any doubt that the *beard* would have been less perfect? Shakspeare, who has left no passion of the human soul unillustrated, has said, "I like not a 'oman with a great peard," and few will say that his taste was either singular or fastidious. As a woman, then, the case of Prof. Gross would have found a talisman in the beard, that would have secured it against all the Lotharios upon earth. We think that we have settled the first deduction from the premises—the liability to an unfortunate matrimonial connection. And if the proposition of such a connection is an outrage upon common sense and abhorrent to every feeling of humanity, as it doubtless is, what becomes of the other considerations paraded as arguments in justification of this *unique!* operation? Such, for instance, as that "no impregnation could ever occur, and even copulation could be performed but imperfectly!" We have seen the objects for which the operation was proposed. To prevent sexual desire, and in preventing this, to secure the person against the mortification and disgrace of an unfortunate matrimonial connection with a *man*, who could not impregnate the subject, and with whom copulation must be at best but imperfect—and we think we have shown that no such consequence could possibly have resulted from this desire, and that for the objects stated, therefore, the operation was unnecessary. But this is but a small part of our object. We intend to show with no less

conclusiveness that the operation tends strongly, and will in all human probability, secure to the unfortunate subject the identical catalogue of ills to prevent which it was proposed and executed.

It was intended to convert, by emasculation, this poor little boy—unfortunate by nature, and made doubly so by art—into a girl. And three years afterwards, we learn that the experiment is succeeding admirably. That *she* has quit riding on sticks and taken very kindly to dolls. The parents, by aid of the surgeon, are in a fair way to make a woman of her. Of course *she* will know nothing to the contrary. That the experiment be made successful she must be interested in it, and be taught to acquire the usual accomplishments of woman. No *beard* will now rise, a signal to warn a lover of his danger, or reveal the sexual secret. No sexual desire now! which would instinctively repel man. All these have departed at the magic flash of the surgeon's knife. The very voice with which nature has distinguished sex, so that the mouth couldn't be opened without revealing it, has here been hushed by the surgeon's skill. I ask you, reader, in all serious soberness, what now is to prevent this woman of the surgeon's knife from marrying a man, and thus bringing upon herself the social calamities to prevent which she was called into being? Absence of sexual desire? Pshaw! A philosopher should tolerate no such objection. It would apply to ninety-nine hundredths of the women who marry, and we believe to all. Will parental interposition be urged? This is not always proof against elopements, and besides, children sometimes outlive their parents.

To perform such an operation, for the prevention of the objects specified, we repeat was the *ne plus ultra* of folly and absurdity, and that human ingenuity could not have devised a more plausible method of securing to the individual the identical calamity, than that put in requisition alone to prevent it.

Should, then, this operation have been performed at all for any object? We unhesitatingly answer, it should not. It was not justified by morals, science, nor religion, but would, on the contrary, have been opposed by a jury selected from any of these departments in any country in Christendom. God tempers the storm to the shorn lamb, and could therefore have tempered the passions of this poor child to his peculiar condition. We put it to every reader if it had been his son if he would not infinitely have preferred that he should have grown up a man, with all the powers, aspirations and abilities of a man, mental and physical, save alone that of propagating his species, than have him thus a poor miserable eunuch, dressed in woman's apparel, tremulously vibrating between the sexes through life, with instinctive affiliations for neither, while an object of disgust to both? Or stronger still; we would inquire would any of them, with all the facts of this case before him, had he come into the world thus unfortunate, have thanked his parents and the surgeon for this operation?

We have expressed our views freely of this operation. It was no pleasant duty. We infinitely prefer praise to censure, and with all our repugnance to this operation we had determined to let it pass without the expression of an opinion one way or the other. But it has started the rounds again, and it would seem that the author was anxious for the expression of an opinion, and without waiting to hear from others, as we are in the habit of forming our own, we send it out upon our usual terms, for just what it is worth. Prof. Gross tells us that he could not find its analogue in the records of his profession, and no one is deeper versed in them than he, and we are sorry to know that his successors will find upon the pages of surgery that for which

he in vain so sedulously sought. A similar operation was hinted at by Baba, but not performed :—

“What, sir,” said Juan, “shall it e’er be told
That I unsexed my dress?” But Baba, stroking
The things down, said—“Incense me, and I call
Those who will leave you of no sex at all.”

It is a curious reflection that while Kentucky surgery gave power to one boy to become President, which he did, it has taken from another all power for the achievement of a similar glory, and when Prof. Gross asks rather sneeringly of the Society which appointed him chairman of the committee upon “Improvements in Surgery,” “What improvements?” they might not unaptly reply, “Such as convert the masculine into the feminine gender.”

In the original report of this case, Prof. Gross says : “I would fain present this example as a precedent in similar cases. The reasons which induced me to recommend and perform this operation in the instance before me have been already mentioned, and now, after the lapse of three years, I have no cause to regret the undertaking, or to think that I acted harshly or inconsiderately.”

Prof. Gross presents this example as a precedent in similar cases, and no one will question the authoritative source of the example, and our only reason for examining the paper in the manner we have, and which some may regard as rather harsh, is because of its high authority. Not content with a statement of the operation and the reasons which influenced its recommendation and performance, the author proposes it, in so many words, as a precedent to be followed in all time to come under similar circumstances. He warms into eloquence as he points to the records of his predecessors and contemporaries with the one hand, while with the other he grasps the scroll of immortality which is to guide coming generations. “If,” says the learned author, “the records of Surgery and Medical Jurisprudence are silent upon the subject; if the learned doctors of the Sorbonne, the fathers of the Royal Academy of Paris, and the Fellows of the Royal College of London have left us no precepts; and if the experience of the present day furnishes no example; all this, and much more, does not prove that the practice here recommended is not perfectly just and proper, and vindicated upon every principle of science and humanity.” Time was when the sanction of name could make any absurdity popular, and that time of all others is the most conspicuous for absurdities. The present century, remarkable as it is for self-reliance and demonstration, is no less so for its freedom from the blotches of absurdities in every department of knowledge, and who ever finds pleasure in the contemplation of a clear page will not think lightly of the labors of those who are honestly diligent to keep it so.

But Prof. Gross, as if to give additional importance to this case, in an axiomatic flourish makes a most untenable declaration. We are assured that “A defective organization of the external genitals is one of the most dreadful misfortunes that can possibly befall any human being. There is nothing that exerts so baneful an influence over his moral and social feelings, which carries with it such a sense of self-abasement and mental degradation, or which so thoroughly ‘maketh the heart sick,’ as the conviction of such an individual that he is forever barred from the joys and pleasures of married life, an outcast from society, hated and despised, and reviled and persecuted by the world.”

We have not made this quotation to show that the Professor’s operation in the case before us has not mended the matter in any of these respects. That

if nature had deprived a boy of a penis, the surgeon by depriving him of his testicles did not lessen the amount of defective organization in the external genitals—nor would the same operation enable the subject of it to regard himself with a diminished sense of self-abasement and mental degradation, or better fit and qualify him for the joys and pleasures of marriage, or make him less an outcast to be hated and despised and reviled and persecuted. It was no part of our object to show this. It was to show that such a calamity in the fervid imagination of the learned surgeon, is greatly exaggerated. Is it better to be born without mind than without testicles?—or with hideous physiognomical deformity than without a penis? Many great and wise men have gone through life without using those organs, who had them, and many other good and wise men have done the same because they had none to use. It is known that one of America's greatest statesmen had no testicles, and whose virile organ was scarcely more than that of a child, and utterly useless for any office save that of a catheter; yet his whole history attests that when he was reviled the reviler was skinned for his pains. Hated he might have been, for it is the fate of the great, but he could not have been despised, unless by the fool in his folly.

We have been taught to appreciate brain as in every way superior to testicle, and to regard idiocy or madness a calamity incalculably greater than any the external genitals can pretend to control, and we assert that we would prefer the brain of the writer of this article under consideration, with its grasp and its learning, its aspirations for the achievement of all that is elevated, good and truthful, together with its blunders and absurdities, than to possess the aggregated powers and capacities of the entire genital force of all the surgeons, from Ambrose Paré to Gross, inclusive.

CASE XXXIII. *Malformation of the female organs of generation a ground of divorce.* American Journal Med. Sciences, 1848, vol. xv.

The parties, whose names are concealed, were married on the 3d of Feb., 1842, the husband being aged about 26 years, and the wife 25. The husband stated, in his application for a divorce, that they had lived together until the 11th of November, 1844, when she returned to her father's house; that the marriage had never been consummated in consequence of a natural malconformation of the sexual organs; that he for some time was of opinion that the inability was the result of a temporary obstruction, which would probably yield to simple exercise, aided by horse exercise, which he recommended to her, and in the use of which she long persisted; that, in the months of September and October, 1844, she, at his earnest entreaty, submitted to an examination by Drs. Bird and Lever, and upon their concurrent reports, as to her natural and irremediable malconformation and bodily defects, he for the first time disclosed to his legal advisers the non-consummation of the marriage, and now applied for a divorce.

The answer contained a general denial of the statement of the malconformation and non-consummation, and stated, that in the months above named, in 1844, she, by reason of not having any child, and not on account of any natural or irremediable conformation or bodily defects, submitted, at her husband's earnest request, to medical examination.

On the 5th of April, 1845, Dr. Bird, Dr. Cape, and Dr. Lever were appointed by the court, inspectors to examine the female. Their report is as follows:—

"April 5, 1845. We, the undersigned, have this day particularly examined the parts of generation of Maria D——, and we are unanimously of opinion, that she is undoubtedly capable of performing the act of generation, and of being carnally known by man. We are further of opinion, that, al-

though sexual intercourse can occur, yet conception cannot result." Signed as above.

This report leaves the matter rather mysterious, even to a medical man, and it is therefore necessary to state the evidence of Dr. Bird and Dr. Lever.

It seems that the former was consulted by the defendant for about a year past, for certain ailments, and in pursuing his inquiries respecting her indisposition, he found it absolutely necessary to make an examination, and the result was that he ascertained that the external sexual organs were imperfect, or rather undeveloped; that she had the appearance rather of a girl not having attained puberty, than an adult; and internally, the vagina, which ought to have been of an internal depth of about three inches, was, in fact, as ascertained by admeasurement, only three-quarters of an inch in depth. "This was decidedly a natural malformation of the parts, but not such, as I was enabled without further investigation, to pronounce whether remediable or irremediable, though it was certain that if the former, it could only be effected by an operation. With the view of endeavoring to ascertain if an operation could be performed with a prospect of success, a more minute and careful investigation became necessary, and such was subsequently made by myself in conjunction with Dr. Lever, and it was then ascertained that the internal structure of the organs of generation were, in addition to the deformity already mentioned, further importantly deficient and imperfect, there not being any uterus. This was ascertained by me beyond the slightest possibility of doubt, and that the vagina formed an impervious *cul-de-sac*, and that, consequently, any operation would be wholly ineffective; and I depose that the said Maria D—— is, therefore, irremediably incapable of procreation and conception, arising entirely from the organic deformities which I have explained, viz., the absence of the uterus and the irremediably impervious state of the vagina."

Dr. Bird further deposed, that on the examination made April 5th, 1845, with Drs. Lever and Cape, he had found that the vagina had become considerably elongated, being now of the depth of two inches, ascertained by actual admeasurement. "I cannot, therefore, depose that it is absolutely impossible for the vagina to attain a further elongation, but I am not acquainted with any means, medical or otherwise, capable of improving its existing condition." He further stated as his opinion, that the deformity did not entirely prevent her from having connection, as it had undoubtedly taken place, but such connection must be of an imperfect character, and allowing only a partial insertion of the penis. The husband had communicated to him the imperfect connection he had had, and with great declared suffering from pain on her part, but that he had attributed it at first, and for a long time, to a mere temporary obstruction, capable of being overcome by further intercourse.

The testimony of Dr. Lever coincides in all the main points with that of Dr. Bird. He states, however, that the female admitted to him the total absence of the menses. As to the partial extension of the vagina, he was unable to say whether it had been caused by sexual intercourse or by artificial means.

On this testimony the case came to trial. For the husband it was urged, that this is not the case of a woman who is barren; that, undoubtedly, would be no ground for a sentence of nullity—but of one who has no uterus, and in addition to that defect, has her vagina so formed as to preclude sexual intercourse in the proper sense of the term. If a woman be "*mulier viro inutilis*," or, as it is otherwise expressed, "*inhabilis*," arising from a natural

irremediable defect, which is the case here, there is just ground for a sentence of nullity.

The counsel for the wife insisted that to entitle a party to a sentence of nullity, there must be an *utter impossibility* of sexual intercourse. This is not proved by the plea. The case is one of mere sterility, which is no ground for a sentence. Besides, there has been an improvement in the elongation of the vagina, and they will not undertake to depose that there may not be a further elongation. To justify the sentence prayed, the defect must be permanent and irremediable. Again, actual consummation has taken place.

The judge (Dr. Lushington) took time to consider the case, and on the 7th of June pronounced judgment.

The inspectors' report, if considered by itself, is clearly insufficient to justify a decree in favor of the husband. It declares the power of consummation, yet denies the power of conception. But, two of them have been examined, and it is necessary to consider their evidence. Mere incapability of conception is not a sufficient ground whereon to found a decree of nullity. "The only question is, whether the lady is or is not capable of sexual intercourse, or if at present incapable, whether that incapacity can be removed?"

The effect of Dr. Bird's testimony is, that there may be connection of a very *imperfect character*. He cannot say that it is impossible that the vagina should obtain a further elongation, but it must always remain in a deformed and unnatural state. The evidence of Dr. Lever does not materially differ from this.

Now the evidence and the report do not convey the same idea. The latter would induce a belief that the act of generation might take place in its ordinary and perfect form; the evidence speaks of its very imperfect character. The report is silent as to the possibility of cure.

"Certainly, all the circumstances combined, form a case of no ordinary difficulty. It is no easy matter to discover and define a safe principle to act upon; perhaps it is impossible affirmatively to lay down any principle, which, if carried to either extreme, might not be mischievous. Very little assistance can be obtained from authorities. I must rather endeavor to find out what are the true principles of law and reason applicable to the case, following, as far as practicable, or rather not contradicting, former decisions." Sexual intercourse, present or to come, is necessary to constitute the marriage bond between young persons. And this intercourse must be ordinary and complete, not partial and imperfect; yet it would not be proper to say, that every degree of imperfection would deprive it of its natural character. There must be degrees difficult to deal with; but if so imperfect as to be scarcely natural, I should not hesitate to say, that, legally speaking, it is no intercourse at all.

The evidence of the witnesses is somewhat ambiguous. As to conception, there is no doubt that the malformation is incurable, but it is to me doubtful whether they mean that it is incurable as to the mere coitus. If there is a reasonable probability that the lady can be made capable of the natural sort of coitus, I cannot pronounce this marriage void; but if she is not, and cannot be made capable of more than an ineipient, imperfect, and unnatural coitus, I would pronounce it void. Such an intercourse must cause disgust, lead to adulterous connection, or else force the husband to a state of quasi unnatural connection.

The discrepance between the report and the evidence is such as to prevent

a decision until Dr. Cape is examined, and the following questions, in addition to the examination of the parties, are to be put to him:—

1. Whether (without regard to the impossibility of conception) the lady was, at the time of his examination, capable of the act of generation in its natural and ordinary meaning, or only of incipient and imperfect coition?

2. Whether, if not capable of generation in its natural and ordinary meaning, but only of incipient and imperfect coition, such defect arises from malformation incapable of cure, so as to allow of the natural and perfect act of coition?

Dr. Cape, after mentioning his examination of the female in March, 1844, and his subsequent one in consultation with Drs. Bird and Lever, in April, says that during the latter he found the vagina increased in depth. It was precisely two inches; the natural depth would be from four inches to four inches and a half; that this state of things is decidedly a malformation of the sexual organs, positively irremediable; no operation could be performed to effect a cure; that she is capable of a restricted and limited connection, and not of one in its natural and ordinary meaning; it cannot be called perfect, though it is beyond incipient coition. It is just possible that a further, but very slight improvement might take place by continual, frequent sexual intercourse, or by mechanical means. "I will not swear that it is impossible for the vagina to be further elongated, but I do swear, that it could not be effected without endangering life, or running serious risk of doing so."

July 8. The cause came before the court again, with the additional evidence of Dr. Cape, and, after hearing counsel thereon, the judge pronounced the marriage null and void.

CASE XXXIV. *A pervious urachus in a mulatto girl about fifteen years old.* By Robert G. Cabell, M. D., of Virginia. American Journal Med. Sciences, 1848, vol. xv.

On June 10th, 1847, I was requested by Dr. Hodges, of this city, to examine with him and Dr. Walk, of Chesterfield county, what was considered an extraordinary *lusus nature*. The subject was a mulatto girl, of about 14 or 15 years of age, well grown, healthy, and of a very handsome appearance. The navel presented a flattened, disk-like appearance, about the size of a shilling. The skin about it was loose, and in folds, but not so much so as to attract particular attention to it as a deviation from the ordinary formation. In the centre was a small aperture of the usual appearance, through which when in the recumbent posture she could pass her urine, and which, she said, she had done from her childhood and earliest recollection, at pleasure. Her urine was, however, voided, she observed, through the natural channel.

I then introduced a small gum-elastic catheter through this umbilical orifice, which very readily passed, in a canal in the direction of the bladder, for six or seven inches, and when the wire was withdrawn, a fluid, evidently urine in odor and color, passed through the instrument. I then passed the same instrument in the urethra, which was rather smaller than usual, and urine, of the same physical properties as that from the umbilicus, was discharged through the catheter, showing that the two canals communicated with the bladder.

The girl, who presented a very neat and cleanly appearance, said that she experienced no uneasiness or inconvenience from this unnatural passage to her bladder, and, as said above, she could, at her pleasure, evacuate her urine by either channel.

CASE XXXV. *Castration proposed for the cure of epilepsy.* By Dr. S. E. McKinley, of Irwinton, Georgia. Nashville Med. and Surg. Journal, 1855, vol. ix.

A Dr. S. E. McKinley, of Irwinton, Ga., has addressed a letter to the editor of the American Medical Gazette, New York, on the cure of epilepsy by performing castration. He holds that a peculiar erethism of the ultimate nerves of that plexus which governs the sexual system, is the only source of epileptic fits. His experience has proved beyond the adumbration of a doubt, that *the way to cure a man of epilepsy is to castrate him.*

This operation, in the opinion of Dr. McK——, is a very simple, unimportant affair, and to him is likewise very *convenient* for cure. He castrated a negro boy, epileptic, at 14 years old, who was so bad on the little girls and boys that his master, besides flogging him, had threatened to cut him. This patient had no more fits, and at the age of twenty, sold for eleven hundred dollars.

Another case, a gentleman aged 42, had had epileptic fits since 13 years old, and was the father of two daughters. Being morbidly uxorious, the doctor castrated him. This operation, he says, did not disqualify him from conjugal intercourse, and his wife has had two sons within two years after the cure was effected.

Thus, in one case, the epilepsy was cured by an operation which, we are to infer, prevented sexual intercourse; and the same operation in another one produced the same happy result, yet did not deprive him of the marital rights.

Fits, we acknowledge, are very bad things, but this treatment of Dr. McKinley, however convenient it may be to him, blowing hot to one aptient and cold to another, will no doubt be seriously objected to and obstinately opposed. Besides, what are we to do with epilepsy in the other sex, which constitutes the largest number? Surely not spay the woman!

CASE XXXVI. *Simulated death.* Lancet, 1823, vol. i.

A very extraordinary case of this nature occurred a few days ago at Hammersmith, in the person of Harriet Smith, a young woman of interesting appearance, who served as housemaid in the family of Robert Emmerson, Esq., of Oxford-street. This girl, it seems, had about three years ago been thrown from the top of a stage coach, and received many severe contusions, both internally and externally, which seriously affected her strength, and brought on a gradual decay of nature. Being incapable of performing her customary business, she relinquished her situation, and obtained an asylum beneath the roof of a female relative at Hammersmith. Here, notwithstanding her total cessation from all corporeal labor, her complaint still advanced; she every day grew weaker, and was frequently subject to long faintings. Through the kind attention of some ladies with whom she had formerly lived, every aid that eminent professional advice could afford was rendered to her, with a constant supply of such necessaries and comforts as her helpless situation demanded. On Thursday week, she had been taken out for an airing, and returned home with renewed strength and in rather better spirits than usual. After taking some refreshment, she complained of excessive inclination to sleep, and was therefore placed in bed between the hours of six and seven in the afternoon. In apparent enjoyment of profound repose, she remained until a very advanced hour in the following day, when, on attempting to arouse her, she was found to be quite cold; her lips were colorless, and her eyes glazed; all pulsation had ceased; everything bore testimony to the power of the fell destroyer—death. The last offices to her remains which are directed by decency were then performed; the corpse was attired in the usual grave-clothes, and

laid on a bed, where it remained from Friday noon until Sunday morning, the afternoon of which day was fixed for the interment. Happily, however, the horrible event, which we fear occurs but too often, was frustrated. On the removal of the body from the bed to the coffin, one of the persons engaged accidentally placed her hand on the bosom, and fancying its touch imparted a sensation far more warm than the damp and clayey feel of a corpse, she naturally expressed her opinion to those who were assisting in the melancholy office; a closer examination convinced them that they were about to commit to the cold grave a living subject. The cheeks and lips were still livid and colorless; the eye exhibited no indication of vision, but the vital principle reigned about the region of the heart, and on the application of a glass, breathing was once more perceptible. The physician who had attended during her illness was instantly sent for; on his arrival, signs of returning animation were so manifest, that he concluded bleeding and the application of warm bricks would be productive of immediate restoration. He therefore opened a vein, first in one arm, and then in the other, but without effect; every other effort proved equally unavailing, until about five o'clock in the evening, when a rapid change took place; the throbbing of the heart and the pulse became perceptible, the cheeks and lips partially regained their crimson, respiration returned with ease and vigor, and in a few moments all the animal powers were restored. During the interesting interval, the various insignia of death were removed, in order that she should not be terrified by their appearance when perception returned; but being questioned as to her health, in the customary manner, she manifested no knowledge of what her situation had been, merely saying that she felt cold and weak, with an extraordinary oppression, and a sensation of fear not unlike that which is experienced in dreams, when afflicted with the complaint commonly called nightmare. She has improved, not only in health, but in spirits, every day since, and is now likely to be long an inhabitant of this world.

CASE XXXVII. *Successful section of the sciatic nerve at its inferior third, for long-standing violent pain in the foot and leg.* North American Med. and Surg. Journal, 1831, vol. xii.

Wounds of the nerves being still regarded by many surgeons as peculiarly dangerous, and the source of many accidents of the most serious importance, it is right to fix attention on injuries of nerves when occurring in individuals free from particular disease. In the *Revue Médicale* for March, we find an extract from the *Osservatore Medico di Napoli* for December, 1830, exhibiting the result of divisions of the great ischiatic nerve, by Dr. Malagadi, in animals, and in the human subject. This surgeon was consulted by a man aged 31 years, who for eleven years had been afflicted with a violent pain in the foot and leg of the right side, which interested the different nervous branches on the superficial portions of the limb. Considering the little amelioration in the symptoms, and the absence of severe exacerbations, notwithstanding the number and variety of medicinal means adopted for eleven years, he concluded that this was a case not of simple exaltation or depression of nervous influence, but of structural alteration in the nerve. Hence he determined that excision of a portion of the nerve was the most desirable measure to be adopted. To determine, however, more particularly the effects of this operation, he had recourse to some experiments on dogs, in which the nerve was divided, and the animal examined ten months after the operation. He concludes:

1. That the section, practised at the inferior third of the sciatic nerve,

causes a paralysis, and consequently atrophy, but not gangrene of the muscles of the leg.

2. This paralysis extends from half the leg to the extremities of the toes.

3. The leg retains the power of sustaining the body and of motion, because the articulation of the knee and its muscles are not injured.

4. The most certain method of preventing the reunion of the two extremities of the divided nerve, and consequently the return of the sensibility and motion in the foot, is the excision of a portion of the nerve, which insures the utility of the operation. Encouraged by these results, M. Malagadi determined to operate. On the evening previously, a bleeding and purgative were prescribed. On the 5th of March, 1828, the patient being placed in a recumbent position on the abdomen, the requisite incisions were made over the sciatic nerve on the posterior part of the limb, at about four fingers' breadth above the popliteal region, and corresponding to the separation of the flexor muscles. The nerve being exposed and separated from the areolar tissue and the vessels which surround it, was divided at the superior angle of the wound by means of a curved, probe-pointed bistoury. The patient was immediately seized with an universal tremor, and a very violent lancinating pain, which extended rapidly from the injured portion to the brain, following the course of the vertebral column; almost immediately syncope ensued, but it was of very short duration. On his recovery the nerve was again divided at the inferior angle of the wound without the least sensation being excited. The wound was dressed and the patient placed in bed with the limb extended, not to prevent a reunion of the nerve, for an inch and a half of it had been excised, but to prevent the approach of the extremities, so that adhesions to the neighboring parts might not give rise to stretching of the nerves, and hence to a renewal of the pain. The sufferings which existed previously to the operation, almost immediately disappeared. The half of the leg, and the whole of the foot were paralyzed, and a sensation of pricking and itching were felt in the same parts. The sensibility of the internal part of the foot and leg was very obtuse. After five months, the cure was complete.

CASE XXXVIII. *Anæsthesia of a portion of the trigeminus nerve.* British and Foreign Med.-Chir. Review, 1841, vol. xxxiv.

A woman, 42 years of age, had the misfortune to fall and strike the back of the head on the edge of a stair. A year afterwards the catamenia ceased altogether, and from this time she began to suffer from frequent attacks of most violent sneezing. No unusual appearance could be detected in the nostrils; and it was therefore suspected that there was an irritation of the fifth pair of nerves in the cranial cavity. Along the course of the first and second divisions of the trigeminus there was no loss of sensibility; but the third division was decidedly *anæsthetized*.

The left half of the under lip, both on its inner and its outer surface, and the left half of the chin, were quite insensible, even when pricked deeply with a needle; the inner portion of the muscle of the corresponding ear and of the meatus auditorius were equally dead to all impressions. The teguments of the left temple near the hair, and also the entire left half of the tongue, were perfectly insensible alike to injury and to changes of temperature: this side of the tongue too had lost its sense of taste. But when the skin of the temple near the forehead was pricked, the patient immediately complained—in consequence of this part being supplied with twigs from the *frontalis* nerve. On the right side all the corresponding parts were quite sensible; and even in the left eyelids the other sensory nerves retained their integrity, both as respected sensation and power of motion. The organic and

nutritive functions of all the parts, which were insensible, were not at all impaired. The patient eventually died of dropsy.

Dissection.—At various points on the surface of the brain there was an exudation of lymph; and on the lower surface of the posterior lobe the cerebral substance was found in a state of *ramollissement*, to the extent of an inch or so. The third, or submaxillary branch of the trigeminus on this (the left) side, where it entered the foramen ovale, appeared to be enveloped with a red vascular network, composed partly of fibres and partly of transparent vesicles. On close inspection, it seemed to be either an exudation on, or a hypertrophied state of, the neurilemma: the substance of the nerve itself was swollen, of a yellowish color, and somewhat harder than it usually is. But it was only that portion of the third branch which arises from the Gasserian ganglion, that was so altered. The motory portion on the inner side was unchanged, and coalesced with the larger division beyond the diseased point. The various twigs to the pterygoid and buccinator muscles, to the temple, the tongue, and the lower jaw, were throughout in a normal condition, as well as the third branch of the right trigeminus, and also the glosso-pharyngeal on both sides.

CASE XXXIX. *Curious case of numerous tumors on the head and face, and in the abdomen; death.* By Henry Ancell, Surgeon. Medico-Chirurgical Transactions in the British and Foreign Med.-Chir. Review, 1843, vol. xxviii.

Frances Messenger, unmarried, aged 52, applied at the Dispensary, May, 1840. We know not how we can satisfactorily condense the following description:—

"The greater part of the scalp and face was loaded with solid tumors. Those on the scalp were externally of a very florid color, smooth, glossy, and denuded of hair. They varied from a pin's head to a horsechestnut in size, and from a nearly globular to an irregular flattened spheroidal form, with a tendency to assume a mammillated outline. A few tumors, perfectly round in shape, and of a violet hue, were interspersed; forming a remarkable contrast to the former, and never attaining so large a size. Their color evidently depended upon their vascularity, vessels containing red blood being observed ramifying upon the parietes of those which were red, and larger vessels containing dark blood upon the violet ones; but their texture possessed a considerable degree of transparency, and there was, accordingly, an appearance of greater general vascularity than really existed. They were deprived of much of their color on slight compression, but on suspending this the blood returned rapidly, so as to restore them to their natural hue. Some were sessile on broad bases. Others, including many of the largest, were appended to the scalp by short thick peduncles. One of the latter having been removed by incision, and divided diagonally, was nearly of a cartilaginous consistence. It exhibited a smooth, shining, semi-transparent texture, of a very pale, pinkish hue, and was apparently homogeneous, except that a few distinct vessels, from which blood could be easily pressed, ramified through it. There was much greater vascularity in the investing skin than in the tumor itself. The scalpel employed was not rendered in the slightest degree greasy, and was scarcely even soiled. The portions of the scalp from which the tumor was removed bled rather freely. One of the blue variety had been in the right ear for years, completely filling the meatus, and occasioning deafness. These tumors sometimes itched; considerable pain was excited by pinching them; and the patient's statement was that, 'just before rain they shoot and leap a good deal,' but otherwise they were free from uneasiness. Tumors of this nature covered a great portion of the hairy scalp and forehead, and numerous small

ones were scattered over the face, but here they were mixed with tubercles, which differed from them in their general characteristics, as will presently be described.

"One of these tumors was re-examined after being kept about a fortnight in Goadby's saline solution. The texture now presented more of a granular appearance; and although the integuments were very thin and semi-transparent, they formed an indistinct capsule, which could be torn from the subjacent parenchyma, leaving a very rough surface. A small portion of the substance from the interior having been opened out with a needle, placed between two plates of glass, compressed into a very thin stratum, and examined under the microscope with a glass of an eighth of an inch focus, had, in the mass, an obscure cellular structure, and surrounding and attached to it were several distinct, nearly circular, nucleated globules, resembling those figured by Müller as characteristic of one variety of encephaloid disease.

"The skin of the face, neck, and shoulders had a remarkable tawny aspect, and was very coarse and rough, the roughness depending almost entirely upon numerous tubercles before alluded to, many of them extremely minute, others as large as a split pea, and of all intermediate dimensions. They were most thickly set about the nose, eyebrows and ears. The larger had all the characters of lenticular tubercles, depending upon hypertrophy of the dermis, since they were smooth and very hard, of the same color as the surrounding skin, and no sebaceous matter could be pressed out of them. Most of the smaller ones were manifestly follicular elevations, such as accompany other cutaneous diseases; they were a few shades whiter than the surrounding skin, resembling acne punctata without the black point, and exuding on pressure a white substance, similar to curdled milk."

She was a native of Leicestershire; worked in the fields; had first seen the disease at 14 or 15 years of age, but had found a great many small tumors grow during the last year or two. The late Mr. Rose, of St. George's Hospital, extirpated some of the tumors. In July, 1826, she applied to Mr. Bryant, who, at one sitting, removed sixty. They were then less firm, and, on making a longitudinal incision, their contents were easily turned out. Within twelve months, the tumors were all reproduced. About five months previous to her application to Mr. Ansell, she discovered a hardness in the abdomen. On examination, an uneven tumor was detected in the right hypochondrium, where, at times, she experienced pain.

After a time ascites occurred, followed by anasarca of the lower extremities. The anasarcaous limbs inflamed and sphacelated, and she sank exhausted in February, 1842.

Her grandmother was affected with similar growths on the head. Her mother had a large one in the same place, and died dropsical at the age of 79, leaving a large family. Her younger sister has had a mammary tumor extirpated. Her eldest sister, aged sixty-four, is free from the disease. She has had fifteen children, most of whom are married; two of her daughters have each twelve children; and she has more than forty grandchildren, and four great-grandchildren living; the whole of this branch of the family being exempt. Another sister, aged sixty-two, is affected with a large crop of tumors on the head, forehead, temples, and about the ears. They resemble the larger vascular tumors in the present case. She is the mother of a large family, several of whom, including two sons, are similarly affected. In no instance has the disease been transmitted by the males of the family.

Inspection.—The peritoneum "was generally opaque, but with a shining surface. The portion lining the abdominal parietes was very considerably thickened and indurated: it was also studded with myriads of tumors, pro-

jecting into its cavity, many of them not greatly varying from the size of peas, and the whole producing a yellowish granulated appearance. The peritoneal surface of the diaphragm was thickened and studded with similar tumors, either in patches from the size of pins' heads to that of small peas, closely huddled together and compressing each other; or more thinly set, very minute, white, and semi-transparent."

"The minute specks were sessile, and in many instances scarcely, if at all, raised above the surface: but all the larger ones tended to become pendulous and some were completely so, hanging by short necks."

Mr. Ancell thinks there can be little doubt that the affection was seated in the areolar aspect of the peritoneum.

In the *great omentum*, from which the fat had been greatly absorbed, there were numberless granules about the size of pins' heads, with larger masses generally of a globular form, nearly white, or looking like schoolboys' veined marbles.

In the *mesentery* were much larger, and more irregular masses. A few mesenteric glands were slightly hypertrophied, and the surface of the intestines was speckled with the minute granules.

"The peritoneal coating of the superior surface of the liver was thickened, opaque, and free from the deposit; but attached to the anterior edge of this viscus, in a manner suspended from it, and extending beneath the right lobe, displacing and pressing the gall-bladder downwards into Glisson's capsule, a very large mass was found, weighing perhaps two pounds. It had evidently been deposited between the layers of peritoneum at the anterior edge of the liver, since the membrane was continuous from the surface of the organ over the tumor, the whole of which it inclosed as a capsule. The thin edge of the liver was, however, spread to a considerable extent over the upper and anterior parts of the surface of the tumor. The gall-bladder was stretched along its under surface. Two or three small deposits were also observed near the larger mass, but isolated in the substance of the organ, and a great number of the pendulous tumors were attached to the loose areolar membrane which surrounded these parts and to that which constitutes Glisson's capsule. The divided surfaces of these smaller tumors presented an appearance similar to those of the vascular tumors on the head and face."

"The large tumor was of an irregular ovoid form, with a nodulated surface. It possessed a very firm texture. The scalpel with which it was divided diagonally was not soiled in the slightest degree. The tints presented by the cut surfaces were extremely varied, green and greenish-yellow predominating. It was nearly white, and almost cartilaginous at its centre, and there were distinct fibrous radii, of irregular dimensions, proceeding from the centre towards the circumference. The remainder of its substance was made up of large lobules, varying in size, and these again presented an indistinctly cystiform aspect in their interior and outline."

The tumor could not be called highly vascular.

Much limpid fluid in the ventricles and between the membranes of the *brain*. A tumor of the size of a pea, and another much larger, in the substance of the *uterus*.

"Some of the profession who saw the external tumors designated them moluscum, others vascular sarcoma, and the terms scirrhus, fungoid growth, encephaloid in a crude state, albuminous sarcoma, and colloid cancer, have been applied to the internal disease. Mr. Kiernan made the section of the large mass, but declined giving it any name."

Mr. Kiernan was wise in his generation. For certainly there is no one class of cutaneous complaints to which this can be fairly said to belong. Mr.

Ancell makes many just observations on the nosological characters and position of the case, for which we must refer to the original. He concludes thus:—

“Upon the whole, then, it would appear that there exists a diathesis or state of constitution subject to an aberration of the nutrition of various parts, or a particular tissue, and that the local aberration as well as the diathesis are deficient in some of the characteristics of cancer, although, from the similitude in anatomical structure of the diseased tissue to true scirrhus, attended with symptoms of cancerous cachexia, we can but suspect that, owing to causes superadded, these growths are liable to become carcinomatous and destructive.”

CASE XL. *Children born with one anus and two vaginæ.* Lancet, 1855.

Many of our readers will remember the exhibition of the Siamese twins, now living, we believe, in America, and married to two sisters. Another celebrated case of the fusion of two children was offered in the case of the Sardinian children, Rita-Christina, a twin, in whom the head, thorax, and arms were double, with one abdomen and two legs, exhibited in Paris in 1830. In many respects the specimen now exhibited in London is far more remarkable than either the Siamese or Sardinian prodigies. The cephalic, thoracic, and abdominal cavities are perfectly developed as in two individuals, there being two heads, two thoraces, and two abdominal cavities. There are also four inferior extremities. *The point of fusion is the sacrum of each of the two individuals.* The sacral bones are not exactly united dorsum to dorsum, but the right portion of the dorsum of the child on the left is united to the left portion of the dorsum of the child on the right; thus the children are able to stand, to a certain extent, side by side, and to advance together with their faces forwards. The peculiarities resulting from the fusion of the sacral bones are very remarkable. There are two pelvic inlets, there being four iliac bones and two pubic arches; but as the sacral bones are fused in their lower portions, the two pelves are not complete at the outlet, there being, in fact, only one common outlet to both pelves. Both the children are females. At each extremity of the common genital fissure there is a clitoris; within these, towards the median line, there are two urethral openings, and in the centre a double hymen and a double vagina, one evidently belonging to each child. There is but one perfect anus, and this is the only point at which any apparent visceral fusion occurs. The single anus is not situated in the centre of the fusion, or at any point represented by the termination of the sacral and coccygeal bones, but between the two children as they lie side by side—that is, if the children were made to lie laterally, the common anal orifice is found between the right buttock of the child on the left, and the left buttock of the child on the right. If the two children are now completely turned, there is seen on the opposite side an imperforate anus, but the feces of the two children pass through the one opening only. The children are five years of age, very intelligent, and interesting in their manners.

We have now had wonderful twins from Europe, (Rita-Christina); from Asia, (the Siamese); from Africa, (above described); it remains for America to produce hers. Will she be long in the accouchement? We trust not.

SECTION XVI.

SURGICAL ANECDOTES.

CASE I. *Heroic firmness in a patient during the performance of the Cæsearean section.* British and Foreign Med.-Chir. Review, 1846.

This case occurred in a dwarf woman, thirty-two years of age. The description given of her deformed person is such, that one is surprised how any human being could have had connection with her. Her pelvis resembled that of a child, its antero-posterior diameter not exceeding an inch and a half. A live child was speedily extracted. The poor creature bore the operation with heroic firmness. "During its continuance she kept her face covered, and from her utter silence seemed as if dead; but as soon as it was completed, a crooked arm was stretched out from beneath the clothes towards the operator, and she was heard to say, "Doctor, now you have finished the operation, pray give me a pinch of snuff." Had I and so many others not have been present at this exhibition of Spartan firmness, it could never have been believed, and yet the fact is indubitable." She died a week after the operation during a recurrence of broncho-pneumonia, to which she had been subject at intervals for some months. On *examination after death* no inflammation of the uterus, peritoneum, or abdominal viscera was discovered.

CASE II. *Sang-froid of a French colonel at the battle of Waterloo during amputation at the shoulder-joint; recovery.* By Baron Larrey. Lancet, 1843, vol. xlv.

Colonel Souard had received so many sabre wounds in the right arm that it became necessary to amputate that limb at the shoulder-joint on the field. During the operation, however, this officer not only did not manifest any sign of pain, but even dictated a letter to the emperor, requesting he might be retained in command of his regiment, and, the dressing finished, he mounted his horse and rode into the rear. This noble-minded person happily recovered.

CASE III. *A soldier cutting out the ball in his own thigh with a penknife.* From Dr. Gluck's Lectures on Military Surgery. American Medical Monthly, 1855.

To give you an instance of the deliberate coolness of such young men as belonged to this battalion, I will briefly state to you the history of one case, to which I shall take opportunity to revert, on account of its peculiarity, when treating of gunshot wounds in the thigh. D. P——, a good-looking red cap soldier, twenty-four years of age, received a wound in his left thigh, from a bullet discharged from the rifle of a barbarous Serb, who stood on the top of a low church tower, and subsequently fell motionless to the feet of the wounded Honvéd. The red cap Honvéd, exasperated at the destruction of the enamelled cross he carried in the pocket of his pantaloons, as a sacred reminiscence of his mother, fought like a lion, after having received the shot, alternately bayoneting, loading, and discharging. For his wound he cared little. The battle that began at two o'clock, and at about four cost him a wound, found him at nine in the morning yet among the last on the field. Was it not for his cross, that he looked at immediately, and found an arm of it shattered, he would not have been aware of his wound. When the battle was at an end, he repaired to the ambulance with his swollen limb. The bullet could not be found, in spite of several attempts. The wound, however,

healed up; after nine weeks, he wore his red cap again in rank, and was promoted to the rank of officer. He paid little attention to his leg, and it gave him no trouble while the war was raging. In his fortunate escape to England, the wound broke open, and passing some time in the hospitals of the various countries he travelled, the bullet was several times looked for, but not found—he left the hospitals with the bullet in his thigh. While a refugee in London, he suffered, off and on, until tired, when he resolved to have it cut out. One day, much annoyed by the pain in his thigh, he called at my office, and not finding me in town, he applied to one of the surgeons of the day, who, after examination, could not ascertain the situation of the ball. Directing him, with a note, to me, the surgeon requested me to assist him, and for that purpose to bring him to the hospital he had the charge of. With this view, I repaired with my countryman to the hospital, where, in the presence of the pupils, I explained that my comrade, aged twenty-four, had been in forty-nine engagements, and in one of these battles received a gunshot wound in his left thigh. A laugh of admiration by the pupils startled my comrade, who at that time ignorant of the English language, feared to appear ridiculous, and on no account would submit to any further trial. Walking home, the pain in his thigh increased, and he decided on having the ball cut out at once. He lit his cigar, ordered a pail of water, undressed, and laid down in bed. A penknife, used for cleansing his pipe, he seized, for want of any other instrument, stuck it along the eruralis muscle, two inches from the knee-joint, and feeling with his finger, thrust it to the very bone, wherefrom he drew it upwards, forming, most deliberately, a wound two inches in length, which admitted his finger to search for the ball, which he luckily extracted, after some considerable searching. Bandaging his thigh, he applied cold lotions, and was well in a fortnight. Thus the red-cap soldier operated upon himself. The places of those lost in the noble pursuit, were speedily filled, as many were anxious to belong to that corps, and to be enlisted into it, and the spirit of the 9th battalion was transfused into the new comers, who, constantly in fire, fought as bravely as those who originally formed it. Only six are alive out of the twelve hundred who composed it—one of those six is the self-operating red-cap hero.

CASE IV. *Heroism in a naval surgeon.* Laneet, 1854, vol. i.

The following lines, extracted from the account of the Tayleur, which perished on Lambay Island, Ireland, on the 20th of January, 1854, should sink deep in the heart of every member of the medical profession. We need not add one word to the subjoined account, but must express our deep conviction that our departed brother does honor to his country and the profession to which he belonged: "The surgeon of the doomed ship, Dr. Cunningham, was remarkable for his efforts in endeavoring to save first, the lives of his own wife and child, and also the lives of his fellow-passengers; and it is one of the most melancholy features of this disastrous occurrence, that this intrepid man lost his life in the attempt to save the lives of others. When the vessel struck, amid the dire confusion and dismay that prevailed, surgeon Cunningham was seen everywhere trying to restore confidence and courage among the passengers, and endeavoring to preserve order and coolness. He was next seen crossing the perilous means of escape with his little child on one arm, supporting the infant still more securely by holding its dress in his mouth. The ship heaved on the surge of the sea, the rope swerved, he was swept from his hold, and his child was torn from him by the force of the sea and perished. He, himself, sank twice, but at last made good his grip on a

projecting point of rock. While in this precarious position a drowning woman swept by him, he grasped her, and was observed to raise her up and hold her above the water. He put back her hair from her eyes, and seemed to encourage her, but a heavy wave tore her from his grasp, and she then perished. Dr. Cunningham then seized hold of a rope ladder, hanging over the side of the ship, by which he lifted himself on board, hand over hand, and soon after appeared, carrying his wife for the purpose of rescuing her. He had nearly succeeded in getting her across the spar, by means of the rope, when another heavy wave rushed on, and swept off this devoted man and his wife, who were both hurried out in the under-tow and drowned in the sight of the survivors." It is impossible not to be deeply moved by heroism like this, and it is with a deep sense of admiration and sympathy that we express our regret at the fate of so brave and worthy a professional brother.

Dickens says of the above, *Lancet*, 1854 :—

When these men perish at their work, they do not die with soldiers' laurels, but their names become connected with their last brave actions, and are told by Englishmen to one another in their households, so that in after years they receive honor by many a fireside. The surgeon of the Tayleur was conspicuous in his exertions for the reassurance and assistance of the shipwrecked passengers. We read at home, how, while struggling across a rope, with his own infant in his hands and teeth, he was plunged into the sea that dashed his child out of his hold; we read that he was seen, then holding by the ship's side with a drowning woman in his arms, whose hair he was parting gently, and to whom he seemed to be speaking words of comfort. Her, too, the sea forced from his grasp; and we read he was next seen perishing with his wife, during a vain struggle to save her. The noble man with his little family—his wife and child—is swept away; he exists now only in the name of Robert Hannay Cunningham. But these are the men whom we want living among us; these are the energies that we need for the leavening of all society, and for the work of the world. These are not men to be sent out in emigrant ships to the bottom of the sea. Their memory, too, will be best honored if we be indignantly aroused, for their sakes, to amend an evil.

CASE V. *Heroism of a surgeon at Eylau.* *Lancet*, 1854, vol. i.

Napoleon, at Eylau, taking a diamond star from his breast, placed it upon that of a young medical officer. In a deadly charge, the day before, we are told, thousands were wounded. At last, the serried lines of the French gave way, and retreated by a series of manœuvres, in one of which, amongst dead and dying, a surgeon was seen, suddenly called to a general, terribly wounded. A large artery was opened; cold and harassed, the surgeon knelt by his patient; shouts were raised on all sides for him to save himself. The battalions of the enemy literally rode over him; the bullets of the opposing army whistled in hundreds by his ears; still he pressed on the artery, and, ultimately, saved the life of the young officer. A bitter cold night followed a more frightful day. The surgeon crunched the snow in his hand, and applied it to the wound. Something little short of a miracle had occurred, but the surgeon never deserted his post; and, on Napoleon seeing him next day, the diamond cross was placed on his breast. A few months ago a tourist in France saw this cross on the coffin of an old surgeon, and heard the story. Gen. *Ricord* was the wounded soldier, and the name of the military surgeon, who thus saved him, is BECOURT, who died at Belfort, in 1850. He bequeathed to his family the cross of honor worn at the battle of Eylau by Emperor Napoleon I.

CASE VI. *A noble anecdote of the late Prof. Blandin, of Paris.* Lancet, 1849.

In the concours of 1836, for the professorship of anatomy at the Faculty of Medicine of Paris, Dr. Blandin was one of the most dreaded competitors. Among the latter was a young man of very obscure extraction, but who, by previous concours, had placed himself in a prominent position in the academical struggles. The subject of the theses had just been drawn by lots, when this individual, approaching a group in front of the school, said, pretty loudly, "The most difficult task for me is, not to write my thesis, but to get it printed." Dr. Blandin was passing at the time; he heard the exclamation, and immediately asked one of the bystanders in what circumstances his competitor was? He learned that he was remarkable for his talents, but that his means were extremely limited. The next day, this young aspirant for the professorship received from an unknown hand 300 francs in gold, and a letter, the contents of which were pretty nearly as follows: "Consider this sum as a loan, which you will be expected to refund when you are in a position to do so." No signature. An esteemed writer in *L'Union Médicale* states, that Dr. Blandin, though he never confessed this noble action to his intimate friends, did not formally deny it.

CASE VII. *Prof. Dubois delivering the empress of the great Napoleon.* Lancet, 1850.

In the panegyric of Antoine Dubois, the celebrated accoucheur, delivered before the Academy on the 11th ult., by Dr. Dubois (d'Amiens), we find that the obstetric attendant of Napoleon's empress had, in his youth, the greatest difficulties to contend with, and that he rose by his own indefatigable efforts and zeal. Strange to say, the presentation, in Maria Louisa's case, was by the hip; and our obstetric friends will easily judge of the dismay of Dubois, when he found, on examination, that a presentation which, according to Merriman, occurs once in 1800 cases, had just taken place in this momentous instance. Dubois requested from Napoleon a consultation, but the emperor made the well-known reply, "Sir, if you were not here, you would be instantly sent for. Go back to the empress's chamber, and treat her as you would a baker's wife." Dubois proceeded to effect the podalic version, but when the head reached the inlet of the pelvis it got completely locked. Instead of using gentle traction, as advised by some, the accoucheur introduced the forceps, glided the blades by the sides of the head, seized the latter, and brought it happily into the world. Respiration was, however, not established until seven fearful minutes had elapsed, during which all the means of restoring animation were used; at last the child breathed, and by a cry put an end to the emperor's and Dubois's anxiety. The latter was created Baron, and received a present of £4000.

CASE VIII. *Dry tapping.* Sir Astley Cooper's lectures in the Lancet, 1824, vol. iii.-iv.

When about to perform the operation for ovarian dropsy, take care that you may not be misled, and perform your operation on a person in a state of pregnancy. I have known several instances of this kind to occur; it is a very awkward accident, would injure your reputation, and you should always, therefore, previously make yourself acquainted with the state of the parts, by an examination *per vaginam*. By neglecting this precaution, difficulties and accidents connected with the operation often arise. A gentleman from my native county was dining with me one day, and in the course of conversation, asked me if I had ever performed the operation of *dry tapping*? "Good

God! no (I replied), and hope I never shall." "Well (said he), it is an operation that I have seen, at all events; and I'll relate to you the particulars. A practitioner in the town where I resided called upon the surgeon with whom I was a pupil, and told me and a fellow student that he was going to perform the operation of tapping for ovarian dropsy, and if we chose we might go and see it; we thanked him, and attended.

"The woman was seated on a stool, with her abdomen exposed, and the surgeon plunged in the trocar and canula, when, upon holding up a basin, and withdrawing the former, the doctor looked somewhat amazed at finding that no water escaped, and after crying 'hum,' and deliberating for a second or two, he withdrew the canula, refixed the trocar in it, stepped back a pace or two, pointed it towards the abdomen, and again charged it as with a bayonet (*Much laughter*). The trocar was then withdrawn from the canula as before, but still no water! At this he uttered 'oh!' instead of 'hum,'—paused, withdrew the canula—turned to the persons present, and said, 'Gentlemen, this is an operation which you have probably never seen before—it is that of *dry tapping*;' and then to the attendant, 'Nurse, you may do her up' (*Excessive laughter*). 'Faith,' said the gentleman who told me the story, 'we thought he had done her up.'" (*Continued laughter*.)

CASE IX. *Sir Astley Cooper on vaginal discharges in young girls.* *Lancet*, 1824, vol. iii.-iv.

There is a circumstance which I am exceedingly anxious to dwell on, I allude to a discharge from young females; and I hope that there is not one here this evening but will be strongly impressed with the importance of the subject. Children from one year old, and even under, up to the age of puberty, are frequently the subject of a purulent discharge from the pudendum, chiefly originating beneath the præputium elitoridis; the nymphæ, orifice of the vagina, and the meatus urinarius, are in an inflamed state, and pour out a discharge. The bed linen and rest of the clothes are marked by it. It now and then happens, to a nervous woman, to be alarmed at such an appearance, and she suspects her child of having acted in an improper manner; and, perhaps, not quite clear herself, she is more ready to suspect others, and says dear me (if she confesses), it is something like what I have had myself. She goes to a medical man, who may unfortunately not be aware of the nature of the complaint I am speaking of, and he says, "Good God! your child has got a clap" (a laugh). A mistake of this kind, gentlemen, is no laughing matter; and, though I am glad to make you smile sometimes, and like to join you in your smiles, I cannot do it on the present occasion, for it is too serious a matter. I can assure you a multitude of persons have been hanged by such a mistake. I will tell you exactly what takes place in such cases; the mother goes home, and says to the child, "Who is it that has been playing with you? who has taken you on his knee lately?" The child innocently replies, "No one, mother; nobody has, I declare to you." The mother then says, "Oh, don't tell me such stories, I will flog you if you do." And thus the child is driven to confess what never happened, in order to save herself from being chastised: at last she says, "Such a one has taken me on his lap." The person is questioned, and firmly denies it; but the child, owing to the mother's threats, persists in what she has said. The man is brought into a Court of Justice; a surgeon, who is ignorant of the nature of the discharge I am now speaking about, gives his evidence; and the man suffers for that which he never committed. The mother is persuaded, if there be a slight ulceration on the parts, that violence has been used, and a rape committed: she immediately says, "What a horrid villain must he be

for forcing a child to such an unnatural crime, and communicating to her such a horrible disease! I should be glad to see him hanged."

CASE X. *A female nurse versus Mr. Abernethy in making a young man urinate.* *Lancet*, 1826, vol. ix.

A young man one night got out of his garret window, and was climbing to an adjoining garret window of a chamber in which his *chère amie* slept, when, being too intent on his errand, his foot slipped, and he was precipitated on the pavement. He was picked up and brought to the hospital, and on examining his sacrum, it was found to be smashed to pieces. From the extensive injury to the sacral nerves, both the detrusor, or expellant action, as well as the sphincter, or retaining power of the bladder, was entirely paralyzed, and this I hold to be a very curious circumstance. As he could not pass his urine, I was sent every day to draw it off for him, and after I had continued to do this for about a week, the nurse said to me one morning, "La, young man, you need not take the trouble to come here so regularly, for I can make the man p*** when I like," and so saying, she began to press on the hypogastrium, and sure enough the urine flowed in as full a stream as if I had introduced a catheter.

CASES XI., XII., and XIII. *Three cases of successful malingering.* Extracted from Prof. Elliotson's Lectures in the *Lancet*, 1830, vol. xix.

There was once a girl in Strasburg who grew as large in the body as Sterne's stranger who entered Strasburg had done in the nose, and a suspicion arose of her being pregnant. The time arrived at which she should be brought to bed, but it passed away, and she remained as large as before. In fact, she continued to increase for thirty-nine years, and was regarded as such an object of compassion, that all the charitably-disposed ladies in the neighborhood were moved towards her, and their sympathy so strongly excited, that she was well supported all her life without work. She resolutely persisted in allowing no medical man to go near her. After thirty-nine years she died, and the disease was found, not in her body, which was of the proper size, but in her wardrobe, where a large cushion, 19 lbs. in weight, was discovered, which had given her a goodly bulk, and made her waddle in her walk, as though she had a heavy tumor of the abdomen.

A trooper of the 12th pretended that he had lost the use of his right arm, and after resisting severe hospital discipline for a great length of time, succeeded in procuring his discharge; and when fairly seated on the top of the coach, he waved his *paralytic* arm in triumph, and cheered at his success.

A militia soldier pretended that he had lost the use of his lower extremities, and was discharged. He afterwards caused himself, on a field day, to be taken in a cart in front of the regiment, which was drawn up in a line, had the cart driven under a tree, upon which he hung his crutches, leaped out of the cart, sprang three times from the ground, slapped his breech, and scampered off at full speed.

CASE XIV. *A young soldier permitting himself to be partially scalped, &c., to obtain his discharge.* *Guy's Medical Jurisprudence.*

Phineas Adams, a soldier in the Somerset Militia, aged 18 years, was confined in jail for desertion. From the 26th of April to the 8th of July, 1811, he lay in a state of insensibility, resisting every remedy, such as thrusting snuff up the nostrils, electric shocks, powerful medicines, &c. When any of his limbs were raised, they fell with the leaden weight of total inanimation. His eyes were closed and his countenance extremely pale; but his

respiration continued free, and his pulse was of a healthy tone. The sustenance received was eggs diluted with wine, and occasionally tea, which he sucked in through his teeth, as all attempts to open his mouth were fruitless. Pins were thrust under his finger nails to excite sensation, but in vain. It was conjectured that his illness might be owing to a fall, and a proposal was consequently made by the surgeon to perform the operation of scalping, in order to ascertain whether there was not a depression of the bone. The operation was described by him to the parents at the bedside of their son, and it was performed—the incisions were made, the scalp drawn up, and the head examined. During all this time he manifested no audible sign of pain or sensibility, except when the instrument with which the head was scraped was applied. He then, but only once, uttered a groan. As no beneficial result appeared, and as the case seemed hopeless, a discharge was obtained, and he was taken to the house of his father. The next day he was seen sitting at the door talking to his parent; and, the day after, was observed at two miles from home, cutting spars, carrying reeds up a ladder, and assisting his father in thatching a rick.

CASE XV. *Feigned insanity successful.* Lancet, 1851.

The *Medical Gazette* of Lombardy gives an account of a very skilful deception practiced by a shepherd, seventeen years of age, who had violated a little girl of seven. He imitated an imbecile state of mind with so much accuracy, that Drs. Windler and Linck, appointed to report upon him, were thoroughly deceived. When the lad was put upon his trial, he played his part so well, that upon medical testimony he was acquitted. Soon after his liberation he resumed his usual deportment, and confessed that he had practiced the deception upon the advice of a fellow prisoner. A writer in the *Bulletin de Thérapeutique* states, with much reason, that rendering the prisoner insensible with ether might have excited him to talk and disclose his scheme.

CASE XVI. *Extraordinary instance of feigned illness.* Lancet, 1851, vol. ii.

A few days back a curious case occurred at a roadside inn, known by the name of the "Rummer," a few miles from Norwich. The servant girl, aged 18, had been detected purloining her sick mistress's clothing, and soon afterwards was seized apparently with a fit. Her eyes became closed, her jaws firmly locked, her limbs perfectly rigid, and all consciousness seemed to leave her. Violent spasms occasionally supervened, requiring four or five persons to hold her down. Two medical gentlemen were immediately sent for, and, finding her in this state had recourse to the lancet; but this was of no avail, and she remained in the same state for twenty-four hours; when Dr. Webber, who was in attendance on her mistress, arrived, and was requested to see her. After examining the eyes and feeling her pulse, he informed the other medical men it was his opinion the girl was conscious, and that she was merely shamming.

He therefore suggested a plan to awake her. They returned to the girl's bedside, when Mr. Webber said very gravely to the bystanders that it would be necessary to put the poor creature up to her chin in boiling water, and that her chest must be cut open for the purpose of turning the heart, which had evidently got wrong, and that the operation should be immediately performed. Mr. Webber all the time closely watched the features of the girl. Seeing her lips quiver, he took that opportunity to put a drop of tincture of opium into her eye, which forced a scream and a convulsion of the body. But she soon relapsed into her old state. Mr. Webber then described to the other surgeons, by the tracing of his fingers on the chest and throat,

the size of the incision to be made, and at this juncture a policeman arrived, and announced that the boiling water was ready. She was so dismayed at this that she immediately jumped up, and begged hard for quarter. She was desired to dress herself, and was brought before the magistrates, who committed her to the Wyndandham Bridewell.

CASE XVII. *Effects of the imagination in removing a tumor.* Warren on Tumors.

A short time since a female presented herself to me with a tumor, or swelling of the submaxillary gland of the neck, which had become what is commonly called a wen. It was about the size of an egg, had lasted two years, and was so very hard, that I considered any attempt to dissipate it by medicine to be vain, and advised its removal by an operation. To this the patient could not bring her mind; therefore, to satisfy her wish, I directed some applications of considerable activity to be made to the part, and these she pursued a number of weeks without any change. After this, she called on me, and with some hesitation, begged to know whether an application recommended to her would, in my opinion, be safe. This consisted in applying the hand of a dead man three times to the diseased part. One of her neighbors now lay dead, and she had an opportunity of trying the experiment, if thought not dangerous. At first I was disposed to divert her from it; but, recollecting the power of imagination, I gravely assured her she might make the trial without apprehension of serious consequences. A while after, she presented herself once more, and, with a smiling countenance, informed me she had used this remedy and no other since I saw her; and, on examining for the tumor I found it had actually disappeared.

CASE XVIII. *A fundamental stricture of the rectum.* From a lecture of Surgeon Frederick Salmon, London, in the *Lancet*, 1832, vol. xxii.

I was attending a gentleman afflicted with disease in the bladder and urethra, who after some time became dropsical, an effect which was considered by a distinguished physician as well as by myself, to result from a diseased liver. It soon became necessary to remove the fluid from the abdomen, but upon examination, I found the liver (as I believed) so much enlarged, that I deemed it prudent to delay the operation. Indeed, the performance of it appeared not altogether free from danger. In a day or two the patient was seized with an attack of dysentery, from which it was expected he would have died, and so near death was he, that I actually guided his hand while he held the pen to affix his signature to his will. I left him late in the evening, fully expecting when I called the following morning, that his earthly career would have been closed; not a little astonished, however, was I to find him setting up in bed eating beefsteaks for his breakfast. He noticed my surprise, and said, "Doctor, you look astonished," to which I replied, "Verily I am." "I will astonish you still more then," said he, pointing to a large number of chamber and close-chair utensils. "I have had upwards of forty stools since twelve o'clock last night, and I should be very well now, only that my fundament is down." At that time I had not paid much attention to diseases of the rectum. As a matter of course I restored the prolapsed bowel, and having so done, I thought it prudent, in order to quiet the irritation of the part, to order a small opiate enema; but I found that it could not be thrown up; I then introduced my finger and desired him to make an effort to produce a motion, which brought down a circular contraction of the rectum. I said to my patient, "You have got a stricture in the bowels." "What the devil is that?" said he, "a stricture in my bowel!" I explained to him

that the part was contracted, and the caliber diminished. He lifted up his hand, struck me on the shoulder, and said, "D—n it, you are right; I have often strained my guts to fiddle-strings, without getting anything from them."

CASE XIX. *Medical pencilling; a surgeon holding his patient by a finger in the rectum.* Lancet, 1836, vol. xxx.

Unsteadiness in a patient, during an operation, is one of the many trying things which disturb the tranquillity of a surgeon in extensive practice. In an operation on the eye, the ear, the throat, or on an artery in a dangerous position, or an operation for stone, or a high fracture of a limb, demanding the knife, vast responsibility rests on the composure of the sufferer. Even in bleeding, how much depends on the patient! What numbers of aneurisms, even what losses of arms, may be traced to his want of courage—that passive courage of which women may justly claim a more than proportionate share. Much also depends on the steadiness, and mild, though confident manner, in which the surgeon himself sets about his painful duty, inspiring his victim with reliance on a certainty of relief at the expense of a temporary amount of suffering.

These thoughts forcibly present themselves to my mind, on recurring to a case in military surgery, in which a man had suffered some time from a fistula, which there was every hope would be cured by the usual very simple operation. The man was placed in the ward with his head towards the door, to afford the operator sufficient light, and was directed to assume the semi-flexed position, resting his hands upon a chair. The surgeon oiled his finger, and with that motion which is compounded of the corkscrew and the push, gently insinuated it into the rectum, a probe having previously pointed out the course of the fistula. But at the moment the bistoury was handed by an assistant, the soldier cast a rapidly investigating glance beneath his right arm, when the light, brilliantly shed from the polished steel, caught his eye. His own immediate condition flashed upon his mind, and thoughts of instant retreat arose in his terrified mind. He instantly dashed aside the chair, and attempted to bolt, and most probably would have succeeded with a less experienced practitioner, but my friend, on the instant that the first motion gave intimation of the wayward design, instinctively hooked his finger. The soldier struggled. The doctor hooked tighter and held faster. The soldier redoubled his exertions. The doctor crouched and grasped the table. The soldier redoubled his efforts. A scene presented itself which defies description. I know not whether the oleose state of the finger, or a sudden relaxation of the sphincter, caused the result, but the soldier, by a cunning screw and a final jerk, slid from the doctor's crooked but slippery finger, with a rapid concussion of air from the cavity, which astonished the bystanders, and excited still further the ire of the baffled surgeon, who, I regret to say, blessed him once or twice with unbecoming vigor, and administered, as he staggered off, such an inhuman "rise" behind, that the poor sufferer came to the floor, lengthwise, amid the half-disappointed, half-compunctious feelings of the spectators, and of the surgeon, who was almost inconsolable at the frustration of an operation by the terror and indecision of the patient.

CASE XX. *The surgeon detecting the murderer.* From Prof. Thompson's Lecture on Medical Evidence. Lancet, 1836, vol. xxxi.

In all cases in which a surgeon is called to see a wounded or a murdered man, he may very greatly assist the ends of justice by using his eyes and ears, and making correct observations on the conduct of every one around

him. Medical men are among the first that are called on such occasions ; and, as they are tutored professionally to observe, they may most materially aid the purposes of justice on many occasions ; and they have essentially aided it, by being witnesses of conversations and of actions bearing most materially on the guilt or the innocence of persons accused of crimes. This was well exemplified in the trial of a man of the name of Patch, for shooting Mr. Bright, with whom he had been living, in the same house, in habits of the greatest intimacy. The examination of Sir Astley Cooper, who had been led to make some remarks to Patch, afforded strong presumptive evidence against Patch. He was asked by Sir Astley, why he had not applied at Bow Street, to have officers sent down to search the premises of one Webster, on whom, he suggested, some suspicion rested. Patch gave a reason in reply, which led the judge to remark, "That the demeanor of the prisoner was suspicious, because it is more natural for a person to institute the earliest possible inquiry in such a case, involving the murder of his friend, than to display the indifference expressed by the prisoner." Sir Astley asked Mr. Bright whether "he suspected any person to have committed the act of shooting him?" His answer was, "No ; God knows, I never did any man an injury which could lead him to wish to take my life ; but," he added, "Mr. Patch has mentioned to me a man of the name of Webster." "I then turned," said Sir Astley, "to Patch, not wishing to press any unnecessary questions upon the deceased, and said, 'Who is this Webster?'" He answered, "He is a man who was suspected of having robbed these premises, against whom a search-warrant was granted, and his house was searched, and his son has since absconded." Sir Astley was then asked, "Had you any further conversation?" He replied, "Upon this, my Lord, I said, 'Surely, then, you should send immediately to Bow Street, to have officers sent down ; his premises should be again searched.'" To which Patch answered, "No, for nothing would be found ; I should certainly be shot."

Now, in these replies there was assuredly something to wonder at ; namely, that a man, who was the acknowledged friend of the person shot, should, for an instant, think of his personal risk, when it was essential for the discovery of the assassin of his friend. The acuteness of the judge saw this clearly, and pointed it out to the jury on the trial ; and I believe that these replies excited a suspicion in the mind of Sir Astley Cooper respecting Patch, which perhaps would otherwise not have existed.

Another remarkable circumstance elicited the truth in this trial, which should always be attended to by medical men ; that is, to ascertain whether the wounds have been given by a *right* or a *left*-handed man. In Patch's case, the evidence went to prove that the murder was committed by means of a pistol shot by a left-handed man. Sergeant Best, in a conference with the prisoner before the trial, pressed him to say whether he was *left*-handed, but he protested that he was not ; yet, at the trial, being called to plead and hold up his hand, he answered, *Not guilty*, and held up his left hand.

CASE XXI. *Evidence of a surgeon convicting the criminal.* American Journal Med. Sciences, 1844.

Gunshot wounds.—Lord Eldon, late in life, told this striking story of an assize scene, to one of his daughters. "I have heard some very extraordinary cases of murder tried. I remember, in one, where I was counsel ; for a long time the evidence did not appear to touch the prisoner at all, and he looked about him with the most perfect unconcern, seeming to think himself quite safe. At last, the surgeon was called, who stated that the deceased had been killed by a shot—a gunshot—in the head, and, he produced the hair

and stuff cut from and taken out of the wound. It was all hardened with blood. A basin of warm water was brought into court, and as the blood was gradually softened a piece of printed paper appeared—the wadding of the gun—which proved to be half of a ballad. The other half had been found in the man's pocket when he was taken.”—*Swiss's Life of Lord Eldon*.

CASE XXII. *Dupuytren as a diagnostician.—Abscess of the brain.* Lancet, 1837, vol. xxxii.

Dupuytren excelled in a high degree in forming a diagnosis of disease. A man had received, a considerable time before he applied to Dupuytren, a blow on the head. The original accident was not severe, but nervous symptoms subsequently appeared, which obliged him to apply to a surgeon. Dupuytren having examined the man, said to his assistants, “Have the trepanning instruments ready to-morrow.” The students were astonished at this decision, as the symptoms did not appear to them to require such a serious means of cure. But Dupuytren had detected (or divined some might say) the presence of an abscess in the cerebral matter. The bone was sawn through; no diseased appearance was exhibited; the dura mater was healthy; it was cut through, and still no disease appeared. It was then that Dupuytren, with a degree of boldness which has seldom been equalled in the annals of surgery, plunged a bistoury into the substance of the brain. An abundant discharge of purulent matter was the consequence!

Numerous other instances of his diagnostic powers are well remembered. A lady had been treated during several years for cancer of the uterus. A surgeon of distinction had so designated the disease. Dupuytren was at last consulted; he declared that the disease was polypus, and that an operation would be attended with perfect success. He operated, and in three days the lady went to the opera.

CASE XXIII. *Anecdote of Dupuytren; his familiarity with his pupils.* From Prof. Sedillot's Surgical Instruction. British and Foreign Med.-Chir. Review, 1842, vol. xxxvii.

“I shall take this opportunity of stating that it will always give me great pleasure to hear the opinions of any of you upon a case where they differ from those which I have formed of it. In this respect I wish to imitate the example set to hospital surgeons by that great master of our art, the late Baron Dupuytren. Although his professional and scientific susceptibility was excessive, he was not above accepting advice from whatever quarter it came. I remember a striking instance of this feature of his character. A patient, who was received into the Hôtel Dieu, was found on examination to present the symptoms common to a dislocation of the shoulder and to fracture of the cervix of the humerus. After delivering a most able lecture on the diagnostic symptoms between these two injuries, he confessed that in the present case he was a good deal puzzled, and that he intended to wait a day or two before determining the point. On the morrow, he received a long letter from one of the pupils of his clinique, in which the writer not only proved by very satisfactory arguments that the case was in truth one of luxation, but pointed out the best means of reducing it.

“*Dupuytren* read the letter before his class, summoned the patient before him, discussed each argument separately with his youthful opponent, whom he had called to his side, and with his assistance reduced the dislocation amidst the loud plaudits of all the pupils.”

We take much pleasure in giving place to this anecdote, foreign though it seems to Dupuytren's general character.

CASE XXIV. *Similia similibus in surgery; breaking one thigh to remedy shortening in the other.* Lancet, 1851.

An Italian practitioner, Dr. Francesco Rizzoli, sent some time since to the Surgical Society of Paris, a paper on a *peculiar plan* of his for rectifying accidental lameness. It would appear that Dr. Rizzoli was called to attend a man who had broken his thigh, and hearing that some time previously this patient had met with a similar accident on the other thigh-bone, which had suffered great shortening, the surgeon allowed the fragments of the bone, broken in the second place, to unite whilst riding upon one another; and both limbs being thus shortened to the same extent, he remedied the lameness.

A girl was subsequently brought to this surgeon, whose femur, after fracture, had likewise experienced shortening, and he coolly advised the breaking of the sound thigh-bone, to bring them both to the same length. This the parents refused, but the girl was so anxious to get rid of her lameness that she consented. Dr. Rizzoli broke the thigh by the agency of a screw attached to a rod, secured on two iron rings, one placed on the upper, the other on the lower part of the femur; the screw was connected with a strong semicircle, which pressed on the centre of the bone, and which, being tightened, fractured it. An apparatus was applied without reduction, the fragments united by producing shortening, and the girl walked straight. The Society were unanimous in condemning these proceedings.

CASE XXV. *An additional jaw unexpectedly added to a soldier in the Crimea.* Western Lancet, 1855.

We copy the following from the letter of an officer in the Crimea:—

"A curious thing occurred yesterday. A sapper was brought from the trenches with his jaw broken, and the doctor told me that there was a piece of it sticking out an inch and a half from his face. The man said it was done by a round shot, which the doctor disbelieved, but the poor fellow insisted, and said, 'Yes, and it took off the head of the man next me.'" This was conclusive, and the surgeon proceeded to remove the bone: it came out easy, when the doctor said to the man, whose face appeared to preserve its form pretty well, 'Can you move your jaw?' 'Oh, yes, sir,' was the reply. The doctor then put his finger into the man's mouth, and found the teeth were there, and at length assured the soldier that it was no jaw of his that was broken, but that of his headless comrade, inflicting a severe but not dangerous wound. Upon this, the man's visage, which had been rather lengthened, rounded up most beautifully."

CASE XXVI. *A rich pauper patient.* Virginia Med. and Surg. Journal, 1855.

A wealthy merchant, noted for his avarice, had stone in the bladder, and an operation was inevitable. After postponing it for a long time, not from fear of the pain, but from unwillingness to pay the fee, he sent one of his sons to Paris, to make a bargain with one of the big-wigs, limiting him to four hundred dollars. The surgeon who was selected demanded twelve hundred dollars. "Go, sir," said the son, "we will make up the amount in the family." They set out on the journey (the distance was forty miles), the surgeon learned the relations between the millionaire and his children, and perceived that he had no security for the eight hundred dollars above the offer. They reached the house. The master was respectfully waited on by the solemn doctors of the place. He saluted them and the patient with his grand air, and commenced his functions. When he had strapped and bandaged the victim securely, "So," said he, "Sir, my charge is twelve hundred dol-

lars; I am in the habit of taking my fee in advance." The patient remonstrated; but what is the use? He gave the key, swearing in a dozen languages, for he had travelled forty years. The notes were brought, the surgeon counted them, pocketed them, and commenced. He operated to perfection, as he always does; and, as the sons were attending him to the door, quite awe-struck—"Your father," said he, "is a rascal, but you are good boys; here are eight hundred dollars, for which you intended to stint yourselves. I lend them to you; you can return them when you choose. Your father has learned that I am not to be bargained with."

CASE XXVII. *Novel surgery; a goose patient.* Nelson's American Lancet, 1855.

A certain Doctor S—— (probably one of the Smiths), settled in Bloomfield thirty years since, and pursued the joint occupation of farming and doctoring. Some two years after his "shingle" had been lazily swinging on its rusty hinges, the doctor was, one cold and stormy night, called a distance of eight miles to set a fractured leg. Here was a chance, and our friend was not *slow* in catching at it. So packing up his splints and other traps, he arrived at the house and found his patient—an antiquated gander—and the poor thing, sure enough, had a broken femur. The doctor, with the best nature and greatest kindness, reduced the fracture, adjusted the splints, applied the bandages, and left his patient as "comfortable as could be expected." Some months after, the owner of the gander—who, by the way, was an enemy of the doctor's—was presented with a bill of \$10 for surgical attendanc^e on a member of his family. As might be expected, payment was refused. The doctor sued him before a justice, and was awarded the amount, with costs. The gander appealed—his owner, if you please, did so for him—and the judgment was affirmed, with new costs. Here was a damper, but the gander would not "give it up so;" so up he flies to the Supreme Court, where, comfortably "roosted," he heard the reaffirmation of the judgments given in the lower courts, with increased costs, and an execution was taken out for \$160 damages and costs of suits. Now was the time to "scratch." A levy was made on the farm, and the amount paid, leaving the world in doubt as to who was the biggest goose, the *gander* goose or the *man* goose.

CASE XXVIII. *An arm lost by a patient and never afterwards found.*

Mr. John Adams, surgeon to a London hospital, mentions the case of a sailor, who had fallen from the yard-arm of a vessel into a London dock, and was picked out of the water without his right arm, which had been torn off in the fall and was never afterwards found.

CASE XXIX. *Mr. Guthrie amputating at the hip-joint on a queer patient.* British and Foreign Med.-Chir. Review.

An elderly gentleman once sent for Mr. Guthrie, and, without further circumlocution, said, "Sir, I want to know if you can take my thigh out at the hip-joint." Seeing, says that great surgeon, my patient was an oddity, I replied, I would do it with the greatest possible pleasure; and, he desired it might be done the next day, at 12 o'clock. To this I demurred, as it was necessary to know the why and the wherefore, and I begged a consultation with three surgeons, whose opinions he had taken in his case. They all declared him incurable. Mr. Cline pronounced the operation of amputation at the hip-joint as inadmissible, barbarous, and little less than murder. Under these forbidding circumstances, Mr. Guthrie thought it right to promise the patient only one hour to live after this operation was over. When it was per-

formed, the surgeon said, "Sir, I am happy to say your leg is off;" to which he calmly replied, "It was a very unworthy member." After watching the gentleman an hour, the surgeon said, "Sir, you have outlived the promised time, and, please God, you will recover." "Sir," said he, "please God or the devil, which you like—I believe in neither. My trust is alone in you." It was quite clear the patient was a monomaniac.

We know not, but rather think the operation was unsuccessful. Recent intelligence from London announces, too, the death of the great English military surgeon, *George James Guthrie*.

"Man's wisdom is to seek
His strength in God alone,
And e'en an angel would be weak
Who trusted in his own."

CASE XXX. *Wounds near arteries.*

The late Mr. Guthrie, next to Hennen, the greatest of England's military surgeons, states that Gen. Sir Edward Packenham was shot through the neck on two different occasions, the track of each wound being apparently through the great vessels. The first wound gave him a curve in the neck, the second made it straight. The last unfortunate shot went directly through the common iliac artery, and killed him on the spot. This occurred at New Orleans, on the ever memorable 8th of January, 1815. It would thus appear that, even arteries cannot dodge the deadly aim of the western rifle.

CASE XXXI. *Ten wounds made by two pistol balls.*

In an affair of honor, as it is called by duellists, which occurred on an island, in the Savannah River, near Augusta, Georgia, one party was shot through just above the left buttock; the ball also entered the left forearm, passed between the bones, and was taken out just beneath the skin—making four wounds. The other party was shot through both thighs; the ball in this instance cut, too, the raphe of the perineum, and contused the scrotum—making six wounds.

CASE XXXII. *A surgeon abandoning his patient with his leg half cut off.*

We are indebted to our friend, Prof. Campbell, of Augusta, Georgia, for the particulars of this case. He states that he was recently consulted by a patient for partial paralysis of one of his legs. Observing a well-defined line around the member, about the usual point for amputating that member, the following explanation was given: Some years ago, an itinerant doctor was sent for to treat this leg for an ulcer, with an intimation that it might be necessary to cut it off. He came fully prepared to operate, and proceeded at once to amputate with the greatest possible dispatch. Before the patient was fully aware of it, the limb was stripped, and the circular incision made deep into it. No tourniquet or other means having been taken to prevent hemorrhage, the blood flowed out profusely, whereupon, the quasi doctor bundled up his instruments in his handkerchief, mounted his horse, and departed for parts unknown. The wound continued to bleed until arrested by fainting, when, with the assistance of some neighbors and his family physician, it healed, and so did his ulcer; but, he had now to use a crutch, and was so paralyzed, that he came to Augusta, willing to exchange it for a wooden leg or stump.

CASE XXXIII. *A murderer detected by the ingenuity of a surgeon.*

In 1814, a man, named Augustus Dauton, was murdered in Paris, his body

cut into pieces, and these cast into the Seine in different places. They were collected and deposited at the Morgue, the dead-house of that city, and Dupuytren was called upon to examine the case, which he did so adroitly, that the culprit was detected, confessed the crime, and was executed by his evidence alone. Having found the heart and aorta wounded, and the chest filled with blood, he concluded that the man had been killed by a stab; and, as the hands were uninjured, but the head contused, and he still retained a piece of human skin in his clenched teeth, Dupuytren declared that there must have been more than one engaged in the attack, for the hands, a man's natural defence, must have been held securely, and he been compelled to use his head and teeth. Not long after this report was published, a gambler and debauchee, becoming annoyed by a waiter in the Palais Royal, dashed a glass tumbler at him, and was himself wounded just above the wrist. Exciting suspicion by obstinately refusing to have his wound examined, the forearm was forcibly exposed, when there was exhibited an ulcer nearly healed, made as if the flesh had been torn off. He proved to be the brother of the recent victim, was arrested, confessed, named his accomplice, and was guillotined.

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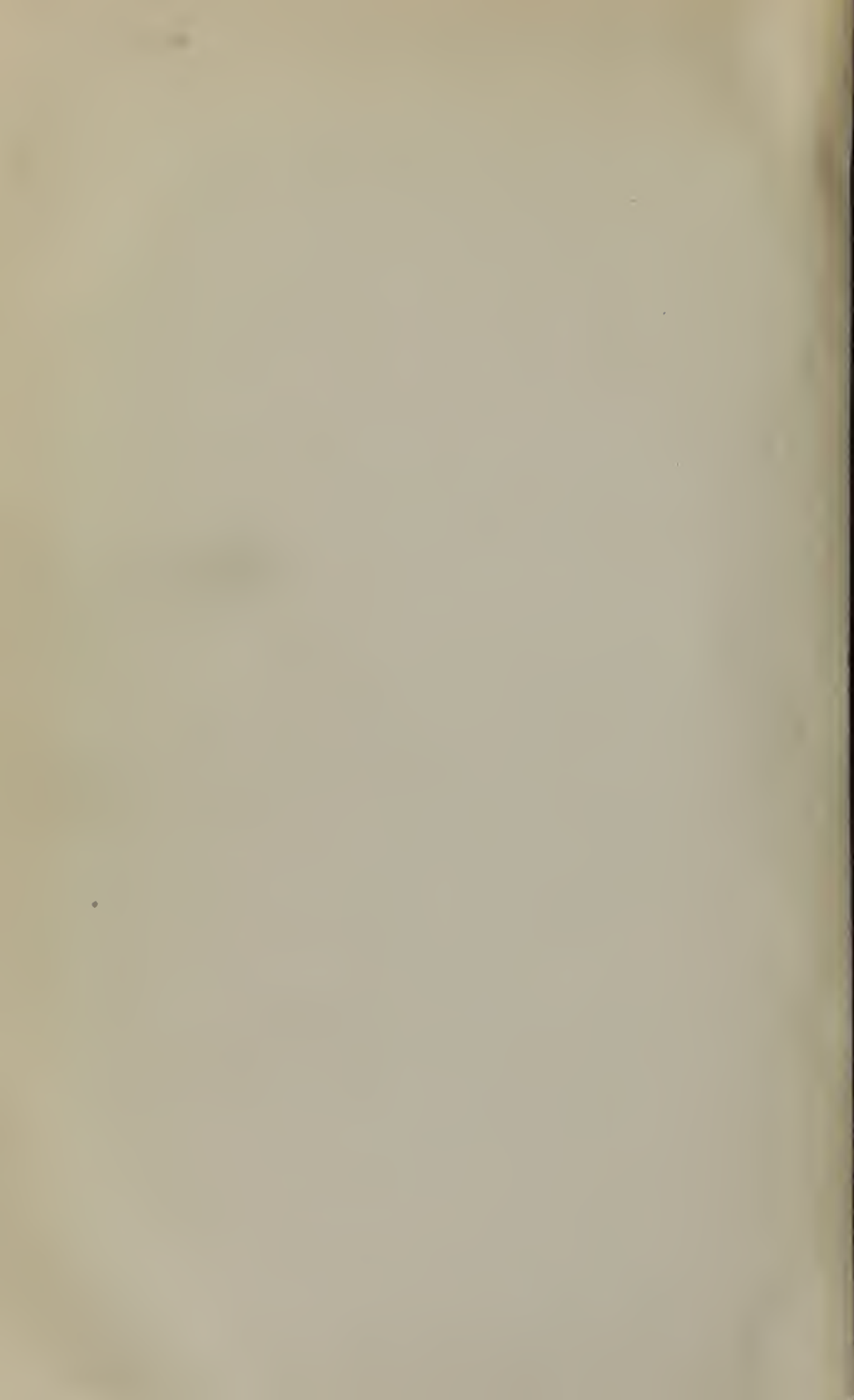
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